

## REVIEW ARTICLE

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### DIFFICULTY IN MANAGEMENT OF A LONG STANDING IMPACTED DENTURE IN UPPER OESOPHAGUS: REVIEW OF A RARE CASE

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**ABSTRACT:** Impacted foreign bodies in esophagus are common occurrence. Such condition can leads to mild to severe complications. We are reporting and reviewing a case of denture which was impacted for last one month. The impacted denture was of double teeth without metal clasps which anchored at upper esophagus approximately 20 cm from incisors. Because of its long duration of impaction endoscopically only a small piece of it was become possible to remove. So cervical oesophagotomy was done and impacted part of denture was removed successfully. Although loose fitting dentures are common problem in elderly persons and sometimes there are chances of their dislodgement and may lodge in larynx or pharynx or may even go inside esophagus which are usually removed as emergency level but such case of long duration impacted denture is a rare incidence and has been rarely reported in text or in English literature.

**KEYWORDS:** Impacted denture. Endoscopy, Cervical oesophagotomy.

**INTRODUCTION:** Accidental foreign body ingestion is a common problem in clinical practice. If the foreign body passes beyond the cricopharynx, it frequently lodges in esophagus because of weak peristalsis and multiple anatomical constrictions. Impacted foreign bodies are common both in children and adults. Coins are most common foreign bodies in children whereas dentures and food bolus are commonest among adults.<sup>[1]</sup> Endoscopy is preferred method for retrieving foreign bodies but open oesophagotomy has been suggested as the safest and most effective method of removing impacted denture.<sup>[2]</sup>

**CASE HISTORY:** A 60 years female patient presented in our outpatient department with complaints of difficulty in swallowing and pain left side of neck for last one month. She had history of accidental swallowing of her double teeth denture one month ago. On general and clinical examination there was no other finding detected except her thin built.

Her all vitals parameter and base line investigations were also normal. Her x-ray chest PA view and x-ray neck AP and lateral view did not showed any evidence of foreign body, but after upper GI endoscopy an impacted foreign body likely to an impacted denture was partly visible which was situated in upper oesophagus approximately 20 cm from incisors and area around impacted denture was edematous so it was not possible to dislodge and extract this denture endoscopically, even though tried twice for this by our expert of endoscopy team of our institute but only a small piece of the impacted denture become possible to remove, so open surgery by cervical oesophagotomy was planned without further delay.

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For this general anesthesia with nasal tracheal intubation was given by anesthesia team and under all vitals monitoring and after proper positioning a left neck incision was given which was oblique parallel to the anterior border of left sternocleidomastoid muscle. Transverse incision was given at antero-lateral wall of esophagus at C7-D1 level where the denture was impacted and buried in the about whole layer of esophagus which was delicately released and taken out (Fig-1 & 2). The incision of esophagus was sutured interruptedly by single layer with 2-0 monocryl with keeping nasogastric tube in situ. A suction drain was placed and wound closed in layer. The nasogastric feeding was continued from 2<sup>nd</sup> to 10<sup>th</sup> postoperative day and finally he recovered uneventfully. After 6 months follow up this patient there was no any complaint.

**DISCUSSION:** In the modern era incidence of denture wearing population is increasing so cases of denture impaction are also in increasing trends.<sup>[3]</sup> Impactions of dentures are common in old age people due to the decreased sensation of the oral cavity in denture wearers and the poor motor control of the laryngopharynx.<sup>[4]</sup>

Most foreign bodies (80-90%) that successfully traverse the esophagus pass uneventfully.<sup>[5]</sup>

The small dentures without hooks usually travel through the alimentary tract to the anus.<sup>[6]</sup>

In our patient although the denture was without hooks but owing to its large size impacted in upper esophagus at C7-T1 level which is the site of second anatomical constriction of esophagus.

Following foreign body ingestion, patients usually present with dysphagia (92%) and pain in the neck (60%) and diagnosis of these cases is usually easily made by history of accidental swallowing of denture followed by dysphagia and neck pain like our case.<sup>[7]</sup> X ray of neck and chest can aid confirmation of an impacted foreign body in the esophagus,<sup>[5]</sup> but dentures are usually made of acrylic resin which is radiolucent, though the radio-opaque wire clasps of the denture can sometimes be seen, if present.<sup>[2]</sup>

Proper treatment planning in the fabrication of dentures with incorporation of radio-opaque materials in the dental resins and adequate post-denture delivery instructions are necessary as preventive measures<sup>[3]</sup>. Computed tomography can confirm the presence of an esophageal foreign body as well as provide more information with regard to neighboring structures at risk from the obstruction<sup>[4]</sup>. Because of their large size and pointed edges, dentures get frequently impacted and are associated with high morbidity and mortality.<sup>[8]</sup>

Prolonged impaction of an esophageal foreign body can cause mucosal ischemia and inflammation. Esophageal injury resulting from a swallowed foreign body may vary from a minimal mucosal tear to a major rupture involving adjacent structures. This may result in perforation, mediastinitis, fistula formation, development of a deep neck abscess or a pleural empyema and accordingly may produce their consequently as high morbidity and mortality.<sup>[5]</sup> So expectant or a conservative management should not be done in the cases of impacted dentures, as the risk of the complications increase with time.<sup>[6]</sup>

When endoscopic retrieval is not possible or failed, immediate open surgical extraction should be performed.<sup>[1]</sup> Because of its large size, sharp edges, metal clasps, endoscopical extraction of dentures carries a high risk of esophageal perforation of 23%.<sup>[3]</sup> In our case as the denture was impacted for more than 1 month, endoscopic extraction of denture was not fully successful due to partial migration of denture into the wall of esophagus.

Cervical oesophagotomy for impacted upper esophageal dentures has low morbidity.<sup>[9]</sup>

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Although, sometimes oesophagotomy has the risk of esophageal leak which may be life threatening. Therefore for avoiding such complication such procedure should be performed in specialist centres by an experience surgeon.<sup>[2]</sup>

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**Fig. 1:** Intraoperative photograph of cervical oesophagotomy showing delivery of anchored denture from esophagus.



**Fig. 1**

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**Fig. 2:** Intraoperative photograph showing retrieved double teathed denture.



**Fig. 2**

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