

Denture impacted in the oesophagus for 9 months: successful endoscopic retrieval

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Abstract

This case report describes the presentation and successful endoscopic retrieval of an impacted denture plate from the distal oesophagus where it had been in-situ for nine months.

Introduction

Oesophageal foreign bodies are not uncommon. Most present within 48 h and are found in the proximal third of the oesophagus. Traditionally impacted oesophageal foreign bodies have required surgical removal using either a thoroscopic or open thoracotomy approach. More recently endoscopy has been shown to be a safe alternative to surgery. Here we describe the technique used to safely remove an impacted denture from the distal oesophagus.

Case Report

A 41-year-old woman presented with a nine-month history of dysphagia, odynophagia and weight loss to the gastroenterology service. She was known to suffer from moderate depression and frequent alcohol misuse.

Urgent gastroscopy revealed food debris in the upper oesophagus and a tight oesophageal stricture at 31 cm *ab oral* which impeded further scope advancement. Biopsies were taken and reported as squamous mucosa with reactive changes but no dysplasia or malignancy. A computed tomography (CT) scan was requested and this showed mid-oesophageal thickening and associated upper mediastinal lymphadenopathy (Figure 1).

There was concern that the stricture was malignant despite the negative biopsies. A repeat gastroscopy was undertaken. Endoscopic views were again hampered by undigested food debris. The oesophageal lesion appeared submucosal. Gentle balloon dilatation was attempted and the 5 cm long stricture was negotiated allowing further biopsies. This set of biopsies once again identified non-neoplastic squamous epithelium and

granulation tissue. A third endoscopy was therefore performed. There was less food debris and at the level of the stricture an odd looking lesion was seen (Figure 2A). The lesion was probed with biopsy forceps and gentle pulling solved the mystery. The lesion was identified as an acrylic partial denture embedded in the chronically inflamed oesophageal wall (Figure 2B). After the procedure the patient was told about the endoscopic findings and she eventually admitted to having lost her denture after an alcohol binge some 9 months previously. She had never suspected that she could have possibly swallowed it.

Under general anaesthesia and definitive airway control, the denture was removed endoscopically.

Prior to the procedure the patient's replacement denture was inspected (Figure 3). The sharp edges were cause for concern. In order to avoid perforation we employed a Capuchon hood (Diagmed Healthcare Ltd, UK) mounted at the tip of the endoscope (Figure 4). After deployment of the hood in the stomach, the denture was gripped with *rat-tooth* forceps and engaged into the hood. Firm traction was used to retrieve the denture, following which careful endoscopic examination of the oesophagus was undertaken to exclude perforation or significant haemorrhage. A contrast swallow was performed 24 h after the procedure. This confirmed an intact oesophageal wall. Thereafter the patient was started on a normal diet.

The patient was discharged on omeprazole 40 mg daily to control acid reflux and allow oesophageal healing. One month after the procedure the patient was well and asymptomatic. At endoscopy the oesophageal mucosa was healing well with resolving inflammatory change (Figure 5).

Discussion

The lodging of a foreign body in the oesophagus is not uncommon. However, the majority



Figure 1. Computed tomography scan showing thickened mid-oesophagus and sub-centimetre mediastinal lymphadenopathy.

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of cases present within 48 h with symptoms of dysphagia and pain.¹ Dentures account for 11.5% of impacted foreign bodies.² This case is unusual as the denture had been present in the oesophagus for nine months without causing a major complication such as mucosal ulceration, abscess formation or perforation. In this case the denture was impacted in the mid to lower oesophagus. According to the lit-

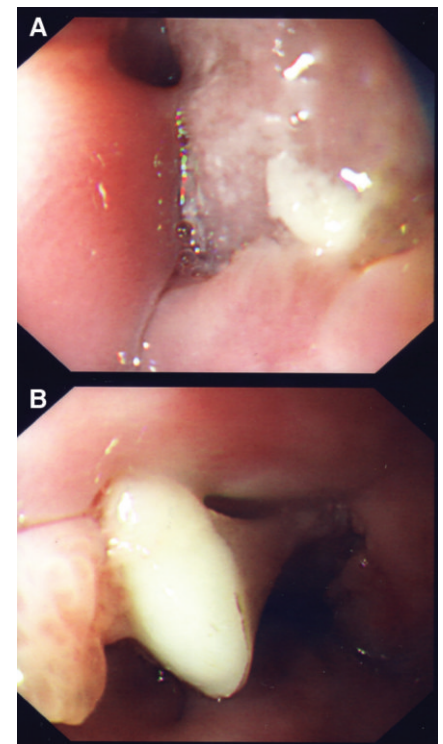


Figure 2. Acrylic partial denture embedded in the mid-oesophagus: A) shows the barely visible denture impacted in granulation tissue; B) shows the denture after probing and gentle pulling.



Figure 3. Acrylic partial denture.

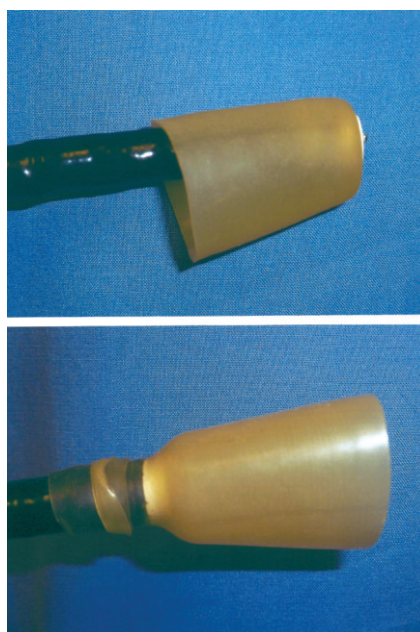


Figure 4. Capuchon hood: on insertion, on retrieval after correct deployment.

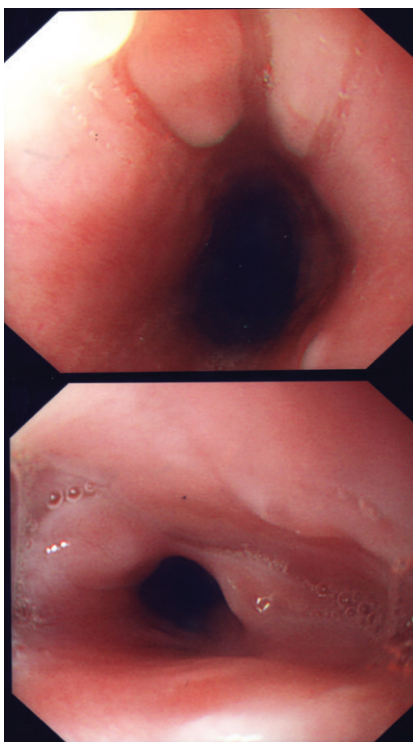


Figure 5. Endoscopic views of the mid-oesophagus 1 month after denture extraction showing slight benign stricture effect through which the endoscope was easily passed.

erature on the subject, the majority of foreign bodies arrest more proximally with only 4.5% being found in the lower oesophagus.³

Since the partial denture in our patient was made of acrylic resin its presence was not appreciated on CT scanning. Instead only the oesophageal thickening and small peri-oesophageal lymph nodes secondary to the inflammatory process associated with the impaction itself were seen. Studies have shown that endoscopic removal of sharp-edged foreign bodies is possible using a number of

different techniques without recourse to major thoracic surgery.^{4,5} Here we successfully employed a Capuchon Hood to protect the oesophagus from perforation when extracting a denture under direct vision.

Conclusions

To our knowledge, this case illustrates the successful retrieval from the oesophagus of the *longest-serving* impacted denture. A careful history paying attention to fine detail, however unlikely, may suggest a correct diagnosis even when endoscopic and radiological features are inconclusive. For foreign objects impacted in the oesophagus, we recommend endoscopic retrieval, using an oesophageal protective device. However, patients should be counselled pre-operatively that major thoracic surgery may nevertheless, be required.

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