Removal of impacted denture by rigid Esophagoscope after failed flexible endoscopy: Report of a case

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ABSTRACT
Endoscopic retrieval of impacted dentures is difficult. Traditional thoracotomy is associated with significant morbidity. We present a case of impacted denture in the mid-oesophagus successfully removed using rigid esophagscopy under general anesthesia after two unsuccessful flexible endoscopy attempts. (J Dig Endosc 2012;3(2):45-46)

Keywords: Impacted esophageal denture – Upper GI endoscopy – Rigid esophagscopy

Introduction
Because of their large size and pointed edges, dentures get frequently impacted and are associated with high morbidity and mortality [1]. Traditional thoracotomy is associated with significant morbidity[2]. Flexible endoscopic removal of impacted dentures is possible if patient presents early. Long history of ingestion and impaction makes endoscopic removal almost impossible; surgery is often required [3]. We present a case of a denture impacted in the oesophagus managed by rigid esophagscopy.

Case Report
A 32-year-old male presented with odynophagia after a month of accidental swallowed denture. Vitals were stable with no signs of perforation. Flexible upper GI endoscopy revealed impacted denture in the mid oesophagus at 24 cm with its flanges embedded in the oesophageal wall. Two sessions of flexible endoscopy using different accessories failed to retrieve dentures. The patient was referred to ENT department and was subjected to rigid esophagscopy under general anesthesia. As both ends were embedded in the esophageal wall, the denture was disimpacted first and displaced down, then it was rotated and removed with help of alligator forceps. The procedure and follow up was uneventful.

Discussion
Impacted dentures can cause many complications [4]. Historically, the initial method of managing esophageal foreign bodies was extraction through the rigid esophagoscope[5]. In 1966, Bigler reported a new technique using a Foley catheter[6] and in the 1970s and 1980s the flexible fiberoptic instrument became an option. At present, flexible and rigid esophagscopy are the two universally applicable methods for removal of esophageal foreign bodies. The success rate with the use of the rigid instrument ranges between 94 and 100% of instances[7] and the estimated incidence of perforation is 0.34%, with a 0.05% mortality rate[8]. The success rate of flexible esophagscopy ranges between 76 and 98.5%[9] and the morbidity (perforation) rate is between 0% and 0.5%[9].

In our patient as the denture was impacted for more than a month, flexible endoscopic extraction was impossible due to partial migration into the wall. The snaring of the denture could not be done due to non availability of free edge...
of the denture. The endoscopic rat tooth forceps failed because of the rounded and thick edges of the ridge of the denture.

The wide lumen of the rigid instrument is of great help in manipulating the foreign body and extracting it[10]. The alligator forceps of the rigid esophagoscope has a larger span which can successfully catch the ridge of the impacted denture firmly to facilitate its disengagement.

Results for removal of dentures by flexible endoscopy can be improved by early intervention, use of general anesthesia and development of dedicated accessories for removal of sharp and larger foreign bodies. This case is an example that rigid esophagscopy can be useful when the foreign body though visible but is not amenable to extraction by flexible endoscopy.

**Conclusion**

Ingested impacted denture in the esophagus with a long history could not be retrieved with flexible endoscopy and available accessories. Rigid esphagscopy is useful in such situations if it is within the reach of the rigid scope by using the alligator forceps.

**References**


