



Prolonged Impacted Denture in the Esophagus: A Case Report and Review of the Literature

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Received: November 18, 2014

Revised: December 2, 2014

Accepted: December 11, 2014

▶ ABSTRACT

Foreign body ingestion and aspiration is among the most common causes of emergency department visit associated with high morbidity and mortality. Ingested and aspirated denture is rare conditions being scarcely reported in the literature. We herein report a 57-year-old man who presented with 2-day history of liquid and solid dysphagia who was diagnosed to have impacted denture in esophagus since 3 years prior to presentation. He was diagnosed to have esophagus adenocarcinoma and had undergone esophageal radiotherapy. The denture was removed successfully using esophagoscopy and the patient was discharged after 48-hour care with good condition. To prevent accidental ingestion, dentures should be made to fit properly. Damaged or malfitting dentures should be discarded and replaced. Patients should be strongly advised against wearing them during sleep-time.

Keywords: Artificial denture; Esophagus; Rigid esophagoscopy; Foreign body ingestion.

Please cite this paper as:

Dar GA, Ganie FA, Ishaq M, Jan K, Ali ZS, Lone GN, Beigh M, Abdullah T, Dar MA, Sidiq MM. Prolonged Impacted Denture in the Esophagus: A Case Report and Review of the Literature. *Bull Emerg Trauma*. 2015;3(1):32-35.

Introduction

Foreign body ingestion and aspiration is among the most common causes of emergency department visit associated with high morbidity and mortality [1]. Coins, meat bone, marbles, safety pins, button, batteries and screws are among the most common ingested and aspirated foreign bodies in pediatric age group [2,3]. In adults, coins and denture has been reported to be the most common aspirated foreign

bodies. Sharp foreign body aspirations and injections is frequently associated with serious complications [4]. If they are not removed at the earliest, they can cause esophageal erosion, perforation, abscess or medias tinitis [3]. Early removal of this foreign body must be considered to reduce the risk of complication [5]. Dislodgement and subsequent ingestion or aspiration of dental appliances is not a common condition [6,7]. We herein report a case of impacted denture in esophagus which was successfully

removed by esophagoscopy.

Case Presentation

A 55-year-old woman presented to the outpatient Gastroenterology clinic of Sher-I-Kashmir Institute of Medical Sciences (SKIMS) with a 2-day history of dysphagia to both liquid and solid material. There was no history of fever, drooling of saliva, shortness of breath, seizures, odynophagia, cough, weight loss or anorexia. On physical examination, the patient was hemodynamically stable and systemic examination was unremarkable. Past medical

history revealed the missing of denture from three years prior to presentation and receiving several session of radiotherapy for treatment of biopsy proven esophageal adenocarcinoma. The patient had dysphagia after the radiotherapy however it was exacerbated during the past two days. On lateral cervical radiography, there was widening of prevertebral space along with a radio-opaque shadow of wire of denture at the level of C6 and C7. Barium swallow study revealed filling defect in one third upper part of the esophagus (Figure 1). We performed upper gastrointestinal endoscopy revealing impacted denture in esophagus, 20-cm below the oropharynx



Fig. 1. Barium swallow study of the esophagus revealing filling defect on and irregularity of the borders in upper part of the esophagus in favor of foreign body.



Fig. 2. Upper gastrointestinal endoscopy revealing impacted foreign body in esophagus at 20-cm from incisor.

(Figure 2). With the provisional diagnosis of ingested and impacted denture in esophagus, the patient underwent rigid esophagoscopy under general anesthesia after receiving a 24-hour course of intravenous antibiotics. An artificial denture was found at 20-cm from upper incisor. The foreign body was dislodged and removed by rigid esophagoscopy (Figure 3). After 24-hours of receiving parental antibiotics and fluids, liquid diet was started and was further advanced to regular. Dysphagia was resolved totally after 24-hour. The patient was discharged with good condition was had no other complaints in outpatient follow-up visits.

Discussion

Swallowing and aspiration of dental foreign objects is often reported in the literature [6-8]. Swallowing is more common than aspiration and usually seen in the elderly [6-8]. Careful examination along with clinical suspicion is necessary for diagnosis and early management of foreign body ingestion especially in elderly and those with history of dysphagia [6,7]. Too often the size and configuration of these objects compound their impaction and removal [8]. Ingestion usually occurs after trauma, intoxication, loss of consciousness or sleep; so there may not be a definite history of ingestion [9]. Psychiatric and mentally handicapped patients run a high risk of denture ingestion [10]. Following foreign body ingestion, patients usually present with dysphagia (92%) and tenderness of the neck (60%) [11]. Other symptoms include: inability to swallow oral secretions, throat pain, painful swallowing, hyper-salivation, retrosternal fullness and regurgitation of undigested food. Indirect laryngoscopy will reveal pooling of saliva in pyriform sinus. Thus the diagnosis can be made by suggestive history of foreign body ingestion. The interesting point of the current case is the

duration of the ingestion and impaction. Most of previously reported cases [6-8] were acute ingestions which raises the clinical suspicion. However the current case had a history of lost denture since 3 years ago after esophageal radiotherapy. This could be explained due to radiotherapy leading to fibrosis and dilatation of the esophagus which allows the denture to be impacted and remain symptomless for a long period of time. In a similar report, Rathore and colleagues [12] reported a 6-month impacted denture in esophagus of a 37-year-old man which was successfully removed by esophagoscopy.

Radiological imaging can determine the exact site of radio opaque foreign body. It is difficult to localize the site of impacted denture by imaging technique if there is no wire in it unless there is complications such as emphysema, mediastinitis, increased prevertebral shadow and loss of cervical lordosis. Their radiolucency makes radiological localization almost impossible, and because of their rigidity, large size, irregular and unyielding edges, impacted dentures are apt to produce lacerations during endoscopic removal from gullets rendered friable by impaction [13] These foreign bodies' especially sharp objects perforate and cause complication. It includes retropharyngeal abscess, perforation to esophagus, aorta, pericardium and gastrointestinal tract. Therefore the possibility of being damage of the vital structures along the path of migration should be borne in mind [8].

Endoscopic extraction of dentures carries a high risk of perforation [14,15]. Extraction of an impacted denture via esophagotomy can be undertaken under direct vision and in an ideal situation with judicious use of the shear forceps [14]. Small perforations of the cervical esophagus in adult patients produced by foreign body impaction or rigid esophagoscopy can be managed by observation, restricted oral intake and intravenous antibiotics [15].



Fig. 3. The denture successfully removed by rigid esophagoscopy from the proximal part of the esophagus.

In conclusion, to prevent accidental ingestion, dentures should be made to fit properly. Damaged or malfitting dentures should be discarded and replaced. Patients should be strongly advised against wearing them during sleep-time. Clinical suspicion along

with examination and radiological evaluation in susceptible patients will assist us in early diagnosis and management of these patients.

Conflict of interest: None declared.

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