CASE REPORT

Huge Denture Causing Acute Obstruction in Esophagus and Stridor

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ABSTRACT

We report a rare case of an unusually long foreign body (denture) impacted in the mid esophagus of a 62-year-old man. He was illiterate and drank wine regularly. He came to me with some attendants with history of taking wine with lunch, followed by acute obstruction since lunch at 12:30 pm and reached Kota by 9:30 pm. Till then, he was nil by mouth (NBM). Following investigations, we made a diagnosis of foreign body esophagus and with the help of rigid esophagoscopy under general anesthesia, we removed the foreign body. Next morning, he could swallow food and water without any difficulty, and we discharged him.

Keywords: Foreign body, esophagus, denture

A large number of ingested foreign bodies, especially smooth or <12 mm in diameter, tend to pass safely through the gastrointestinal tract. However, severe problems, such as perforation, may occur following ingestion of sharp objects, bone fragments, pins or long foreign bodies (>6.5 cm)[1,2]. The postcricoid region is a common site of impaction of foreign bodies (in nearly 84% of the subjects). Impaction of a bolus of food in the distal esophagus in adults is often associated with a pre-existing stricture, diverticulum or tumor[2]. Adults with non-food foreign bodies have a high incidence of psychiatric and social derangements. Most foreign bodies pass through the pylorus; however, some objects may remain in the stomach for a long period. Once they have crossed the pyloric canal, most objects, even sharp-edged foreign bodies such as pieces of glass or nails, pass without harm. But, terminal ileum is again a site with predisposition for impaction. Sometimes, the ingested foreign bodies may remain fixed in the cecum, ascending colon or sigmoid colon[2]. Noncontrast computed tomography (CT) scan is done for diagnosing suspected upper esophageal foreign bodies that may not be visible on plain radiography[3], and in order to rule out perforation[4].

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CASE REPORT

A 62-year-old gentleman presented to the emergency services at night with complaints of difficulty in swallowing, pain on swallowing, drooling of saliva and pain in the chest following the accidental ingestion of denture while drinking wine and eating lunch. He reported that suddenly he swallowed a piece of denture, measuring approximately 4-5 cm, that caused acute obstruction and distress. He was also having problem in respiration. He came to me at 9:30 pm at night from Bundi. He could not retrieve it and landed in emergency department.

He was illiterate, without any chronic disease, and at presentation, there were symptoms of respiratory distress or hoarseness. The general physical examination was unremarkable except that he was looking anxious (Fig. 1). Examination of the ear, nose and throat was all within normal limits and on indirect laryngoscopy, there was pooling of saliva in both pyriform sinuses. An X-ray of the neck and chest region, anteroposterior (AP) and lateral view, was unremarkable (Fig. 2).

Subsequently, a CT scan of the neck and chest region revealed a long radio-opaque foreign body in the whole length of the esophagus and also impinging into the stomach. So, a diagnosis of foreign body esophagus was made and the patient was subjected to rigid esophagoscopy under general anesthesia. Using an adult esophagoscope, upper end of the foreign body was encountered just beyond the cricopharynx and it



Figure 1. Patient with respiratory distress and looking anxious.



Figure 2. X-ray evaluation was unremarkable.

was grasped securely with a grasping forceps and the foreign body was removed with the Jackson's rigid esophagoscope (Fig. 3).

A check esophagoscopy was done and revealed no injury to the esophageal mucosa. The postoperative period was uneventful and the patient was allowed food orally after 12 hours.

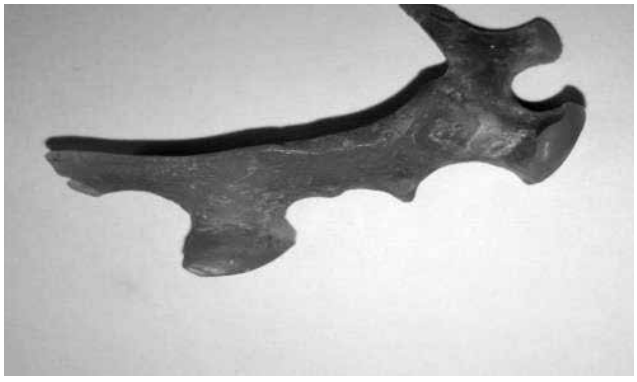


Figure 3. Foreign body removed.

DISCUSSION

A foreign body impacted in the esophagus calls for immediate attention and treatment. Dysphagia (92%) and tenderness in neck (60%) have been found to be the most common clinical features. A vast majority of patients come to the hospital within 24 hours of foreign body impaction. X-ray of the neck (lateral view) appears to be the most valuable investigation tool. Presence of air in the esophagus is a significant finding[5]. Most foreign bodies are radio-opaque and can be recognized on a plain radiograph. Their progress can be checked periodically in the bowel. Bone fragments look like linear or slightly curved densities with sharp margins. Small fish bones or pieces of plastic and wood; however, can appear only faintly radio-opaque calling for a CT scan for their detection[2]. Foreign bodies in hypopharynx and cervical esophagus such as chicken and fish bones often require radiologic evaluation. Noncontrast CT scan may show these small calcified esophageal foreign bodies when X-ray and barium swallow fail[6].

Indirect signs that can be seen on plain radiography include soft tissue swelling and/or air due to edema or hematoma. In case of suspected perforations, esophagography should first be performed with hydrosoluble contrast medium to exclude perforation and can then be followed by a barium examination. The contrast medium may impregnate the surface of the foreign body and making it noticeable. Dilatation of the esophagus proximal to the obstruction with air fluid level and absence of air in the fundus of the stomach are signs of impaction in the distal esophagus, as evidenced on a radiograph[2].

The postcricoid region was found to be the site of impaction of foreign bodies in 84% of the subjects in a study. Esophagoscopy was successful in 97% of the patients and failed in 3%. Coins appear to be the most common foreign bodies (60%), followed by meat-related

foreign bodies (22.5%) and dentures (5%). Complications were noted in 18% patients and were more common in adults (37.1%) in comparison with children (8.8%). Pneumomediastinum was the most serious of all complications. Maximum complications occur with dentures (80%) and bone chips (42%)[5]. Foreign body in the esophagus is therefore a serious condition and warrants early removal by rigid esophagoscopy as it is a safe and effective procedure.

Other treatment interventions involve removal with a laryngoscope in case of foreign bodies impacted in the pharynx, or with a hypopharyngoscope for hypopharyngeal foreign bodies. Less easily, foreign bodies can be removed using a flexible esophagoscope. The common complications encountered with a rigid esophagoscope include injury to the lips, teeth, tongue, palate and esophageal perforation commonly at the level of cricopharyngeal sphincter[2]. Complications can; however, be limited if treatment is initiated within 24 hours of foreign body impaction[7].

Sharp end of the foreign body has to be taken in the lumen of the endoscope to avoid complications. Partial dentures with sharp hooks, metallic springs and screws are the most difficult and dangerous objects to remove from the esophagus[8]. One can cause laceration and perforation during removal of such objects.

CONCLUSION

Early diagnosis and immediate removal of a foreign body are key to avoid any complications. Although 80-90% of the foreign bodies pass smoothly through the gastrointestinal tract, the nature of foreign body has to be determined. In case of a disc battery, it should be removed surgically if it remains in any one position for more than 24 hours. Sharp and large foreign bodies such as a screw have to be removed to prevent any further complications.

It is advisable to have a team approach while dealing with sharp and impacted foreign bodies.

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