

# Huge Denture Causing Acute Obstruction in Esophagus and Stridor

SHAMENDRA KUMAR MEENA

## 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 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, a diagnosis of foreign body esophagus was made and with the help of rigid esophagoscopy under general anesthesia, the foreign body was removed. Next morning, he could swallow food and water without any difficulty, and he was discharged.

**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).<sup>1,2</sup> 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.<sup>2</sup> 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.<sup>2</sup> Noncontrast computed tomography (CT) scan is done for diagnosing suspected upper esophageal foreign bodies that may not be visible on plain radiography,<sup>3</sup> and in order to rule out perforation.<sup>4</sup>

## 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 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

Assistant Professor  
Govt. Medical College, Kota, Rajasthan  
**Address for correspondence**  
Dr Shamendra Kumar Meena  
KR-21, Civil Line, Nayapura, Kota, Rajasthan - 324 001  
E-mail: shamendra.meena82@gmail.com



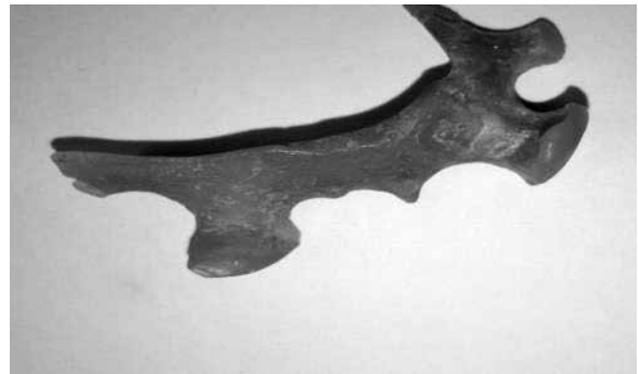
**Figure 1.** Patient with respiratory distress and looking anxious.



**Figure 2.** X-ray evaluation was unremarkable.

it 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.<sup>5</sup> 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.<sup>2</sup> 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.<sup>6</sup>

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.<sup>2</sup>

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%).<sup>5</sup> 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.<sup>2</sup> Complications can, however, be limited if treatment is initiated within 24 hours of foreign body impaction.<sup>7</sup>

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.<sup>8</sup> 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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### Wearable Sensor Detects Worsening Heart Failure

A wearable multisensor patch has been shown to detect signals of patients' heart failure (HF) exacerbations days before hospital readmission in the LINK-HF study.

Continuous 24-hour monitoring analyzed by a machine learning algorithm identified precursors of hospitalization for HF exacerbation with 76-88% sensitivity and 85% specificity, reported researchers in *Circulation: Heart Failure*.

### FDA Approves Dulaglutide for Primary and Secondary CV Risk Reduction

The US FDA has additionally approved dulaglutide for reducing the risk of major adverse cardiovascular events (MACE) in adults with type 2 diabetes with and without established cardiovascular disease (CVD) or several CV risk factors.

Dulaglutide is the first and only type 2 diabetes medicine that has been approved to reduce the risk of CV events for both primary and secondary prevention populations... (*Medscape*)



# Sameer Malik Heart Care Foundation Fund

An Initiative of Heart Care Foundation of India

E-219, Greater Kailash, Part I, New Delhi - 110048 E-mail: heartcarefoundationfund@gmail.com Helpline Number: +91 - 9958771177

*"No one should die of heart disease just because he/she cannot afford it"*

## About Sameer Malik Heart Care Foundation Fund

"Sameer Malik Heart Care Foundation Fund" is an initiative of the Heart Care Foundation of India created with an objective to cater to the heart care needs of people.

### Objectives

- Assist heart patients belonging to economically weaker sections of the society in getting affordable and quality treatment.
- Raise awareness about the fundamental right of individuals to medical treatment irrespective of their religion or economical background.
- Sensitize the central and state government about the need for a National Cardiovascular Disease Control Program.
- Encourage and involve key stakeholders such as other NGOs, private institutions and individual to help reduce the number of deaths due to heart disease in the country.
- To promote heart care research in India.
- To promote and train hands-only CPR.

### Activities of the Fund

#### Financial Assistance

Financial assistance is given to eligible non emergent heart patients. Apart from its own resources, the fund raises money through donations, aid from individuals, organizations, professional bodies, associations and other philanthropic organizations, etc.

After the sanction of grant, the fund members facilitate the patient in getting his/her heart intervention done at state of art heart hospitals in Delhi NCR like Medanta – The Medicity, National Heart Institute, All India Institute of Medical Sciences (AIIMS), RML Hospital, GB Pant Hospital, Jaipur Golden Hospital, etc. The money is transferred directly to the concerned hospital where surgery is to be done.

#### Drug Subsidy

The HCFI Fund has tied up with Helpline Pharmacy in Delhi to facilitate patients with medicines at highly discounted rates (up to 50%) post surgery.

The HCFI Fund has also tied up for providing up to 50% discount on imaging (CT, MR, CT angiography, etc.)

#### Free Diagnostic Facility

The Fund has installed the latest State-of-the-Art 3 D Color Doppler EPIQ 7C Philips at E – 219, Greater Kailash, Part 1, New Delhi. This machine is used to screen children and adult patients for any heart disease.

## Who is Eligible?

All heart patients who need pacemakers, valve replacement, bypass surgery, surgery for congenital heart diseases, etc. are eligible to apply for assistance from the Fund. The Application form can be downloaded from the website of the Fund. <http://heartcarefoundationfund.heartcarefoundation.org> and submitted in the HCFI Fund office.

### Important Notes

- The patient must be a citizen of India with valid Voter ID Card/ Aadhaar Card/Driving License.
- The patient must be needy and underprivileged, to be assessed by Fund Committee.
- The HCFI Fund reserves the right to accept/reject any application for financial assistance without assigning any reasons thereof.
- The review of applications may take 4-6 weeks.
- All applications are judged on merit by a Medical Advisory Board who meet every Tuesday and decide on the acceptance/rejection of applications.
- The HCFI Fund is not responsible for failure of treatment/death of patient during or after the treatment has been rendered to the patient at designated hospitals.
- The HCFI Fund reserves the right to advise/direct the beneficiary to the designated hospital for the treatment.
- The financial assistance granted will be given directly to the treating hospital/medical center.
- The HCFI Fund has the right to print/publish/webcast/web post details of the patient including photos, and other details. (Under taking needs to be given to the HCFI Fund to publish the medical details so that more people can be benefitted).
- The HCFI Fund does not provide assistance for any emergent heart interventions.

### Check List of Documents to be Submitted with Application Form

- Passport size photo of the patient and the family
- A copy of medical records
- Identity proof with proof of residence
- Income proof (preferably given by SDM)
- BPL Card (If Card holder)
- Details of financial assistance taken/applied from other sources (Prime Minister's Relief Fund, National Illness Assistance Fund Ministry of Health Govt of India, Rotary Relief Fund, Delhi Arogya Kosh, Delhi Arogya Nidhi), etc., if anyone.

#### Free Education and Employment Facility

HCFI has tied up with a leading educational institution and an export house in Delhi NCR to adopt and to provide free education and employment opportunities to needy heart patients post surgery. Girls and women will be preferred.

#### Laboratory Subsidy

HCFI has also tied up with leading laboratories in Delhi to give up to 50% discounts on all pathological lab tests.

## Help Us to Save Lives

The Foundation seeks support, donations and contributions from individuals, organizations and establishments both private and governmental in its endeavor to reduce the number of deaths due to heart disease in the country. All donations made towards the Heart Care Foundation Fund are exempted from tax under Section 80 G of the IT Act (1961) within India. The Fund is also eligible for overseas donations under FCRA Registration (Reg. No 231650979). The objectives and activities of the trust are charitable within the meaning of 2 (15) of the IT Act 1961.

**Donate Now...**

## About Heart Care Foundation of India

Heart Care Foundation of India was founded in 1986 as a National Charitable Trust with the basic objective of creating awareness about all aspects of health for people from all walks of life incorporating all pathies using low-cost infotainment modules under one roof.

HCFI is the only NGO in the country on whose community-based health awareness events, the Government of India has released two commemorative national stamps (Rs 1 in 1991 on Run For The Heart and Rs 6.50 in 1993 on Heart Care Festival- First Perfect Health Mela). In February 2012, Government of Rajasthan also released one Cancellation stamp for organizing the first mega health camp at Ajmer.

### Objectives

- Preventive Health Care Education
- Perfect Health Mela
- Providing Financial Support for Heart Care Interventions
- Reversal of Sudden Cardiac Death Through CPR-10 Training Workshops
- Research in Heart Care

## Heart Care Foundation Blood Donation Camps

The Heart Care Foundation organizes regular blood donation camps. The blood collected is used for patients undergoing heart surgeries in various institutions across Delhi.

## Committee Members



### Chief Patron

**Raghu Kataria**

Entrepreneur



### President

**Dr KK Aggarwal**

Padma Shri, Dr BC Roy National & DST National Science Communication Awardee

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Anisha Kataria  
Vishnu Sureka  
Rishab Soni



This Fund is dedicated to the memory of **Sameer Malik** who was an unfortunate victim of sudden cardiac death at a young age.

- HCFI has associated with Shree Cement Ltd. for newspaper and outdoor publicity campaign
- HCFI also provides Free ambulance services for adopted heart patients
- HCFI has also tied up with Manav Ashray to provide free/highly subsidized accommodation to heart patients & their families visiting Delhi for treatment.

<http://heartcarefoundationfund.heartcarefoundation.org>