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Accidental Denture Ingestion: An Unusual Complication of Acute Ischemic Stroke

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Abstract

Introduction: Dysphagia is a frequent complication of acute ischemic stroke, predisposing patients to aspiration pneumonia, malnutrition, and occasionally foreign body ingestion. Denture ingestion in this context is rare but may lead to life-threatening complications, especially if diagnosis is delayed. **Case presentation**: We report the case of a 70-year-old man with a history of smoking and poorly controlled hypertension, admitted for acute right middle cerebral artery infarction. He presented with decreased consciousness, left hemiplegia, dysphagia, hoarseness, hypersalivation, and hypoxemia. Chest CT, initially performed to investigate suspected aspiration pneumonia, unexpectedly revealed an intra-esophageal foreign body corresponding to the patient's missing removable partial denture made of acrylic resin with metallic clasps. An initial attempt at endoscopic extraction failed, and signs of esophageal wall perforation were detected on CT. Surgical removal via cervical esophagotomy with feeding jejunostomy was performed successfully. Postoperative recovery was uneventful, and the patient continued neurological rehabilitation. At three-month follow-up, he remained with residual left hemiparesis and mild aphasia. **Discussion:** Although denture ingestion is uncommon, it may complicate post-stroke dysphagia. Diagnostic delay is frequent, particularly with radiolucent prostheses. In this case, the partial denture was potentially visible on plain radiographs, but CT was chosen directly due to the acute respiratory context, allowing both diagnosis and detection of esophageal perforation. Few similar cases have been reported in the literature, and to our knowledge, this is the first describing esophageal perforation requiring surgical management in a stroke patient. **Conclusion:** Accidental denture ingestion should be considered in stroke patients with dysphagia and missing prostheses. CT imaging plays a crucial role in diagnosis and assessment of complications. Early recognition and prompt management are essential to prevent severe outcomes.

Keywords

Stroke, Dysphagia, Denture Ingestion, Case Report

1. Introduction

Dysphagia is a frequent complication of Acute Ischemic Stroke (AIS), with a reported prevalence of up to 50% in the acute phase [1]. It exposes patients to an increased risk of aspiration, pneumonia, malnutrition, and occasionally to foreign body ingestion. Among these, accidental denture ingestion is particularly rare but potentially life-threatening, especially given the radiolucency of most acrylic prostheses [2] [3]. Only a few cases of post-stroke patients with impacted dentures have been reported in the literature [4]-[6].

We herein report the case of a 70-year-old man presenting with an acute right middle cerebral artery infarction, in whom dysphagia led to accidental ingestion of a partial denture, complicated by esophageal perforation requiring surgical extraction.

2. Case Report

A 70-year-old man with a history of chronic smoking and poorly controlled hypertension treated with angiotensin II receptor blockers was admitted to the emergency department for decreased consciousness and left hemibody heaviness evolving for two days.

On admission, he was obnubilated (GCS 13), presented with left hemiplegia, dysphagia with hypersialorrhea, mild expressive aphasia with hoarseness and oxygen desaturation (SpO_2 88% on room air). Non-contrast brain CT revealed an acute right middle cerebral artery ischemic stroke. Etiological workup identified atrial fibrillation.

Dysphagia was initially attributed to stroke-related bulbar involvement, and desaturation to aspiration pneumonia. A chest CT was performed to investigate suspected aspiration pneumonia and unexpectedly revealed an intra-esophageal foreign body (**Figure 1**). Careful review and family interview confirmed that the patient's missing removable partial denture was made of acrylic resin with metallic clasps. An attempt at endoscopic extraction was unsuccessful (**Figure 2**).

On review of the CT scan, signs of esophageal wall perforation were identified. Therefore, the patient underwent surgical removal via a left cervico-lateral approach with esophagotomy and feeding jejunostomy (**Figure 3** and **Figure 4**).

Postoperative course was uneventful. He was extubated after 24 hours, and after five days in the ICU, he recovered a GCS of 15, though persisting left hemiplegia remained. He was then transferred to the visceral surgery ward, where medical therapy included an antiplatelet agent and statin for stroke, curative anticoagulation and beta-blocker for atrial fibrillation, and optimized antihypertensive therapy. Multidisciplinary rehabilitation was initiated. Oral feeding was resumed three weeks later, and jejunostomy was removed 15 days afterwards.

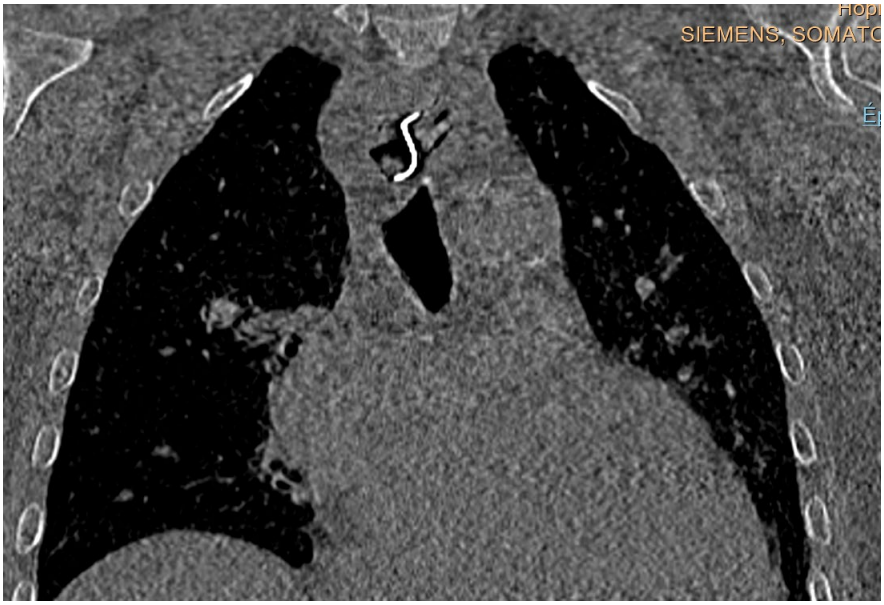

Figure 1. Coronal CT slice of the thorax showing a metallic-density foreign body corresponding to the denture.

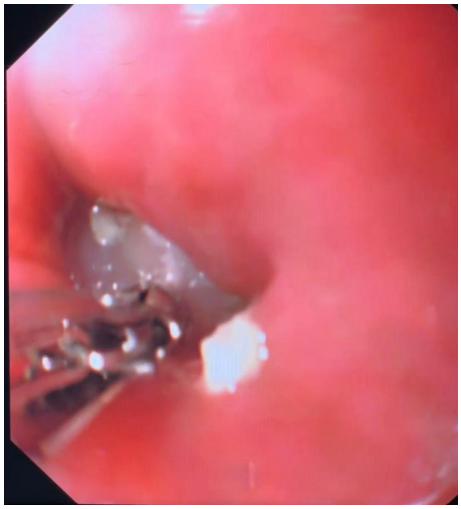

Figure 2. Endoscopic view showing the attempted extraction.

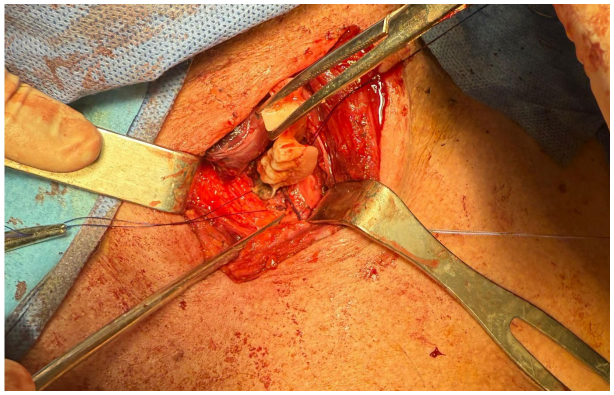

Figure 3. Intraoperative view showing the denture within the esophagus.

Figure 4. Denture after removal.

At three-month follow-up, the patient was undergoing rehabilitation for persistent left hemiparesis (MRC grade 2/5) and mild residual aphasia.

3. Discussion

This case illustrates an unusual but serious complication of dysphagia following AIS. Dysphagia occurs in nearly half of patients with AIS and is strongly associated with aspiration pneumonia, malnutrition, and prolonged hospitalization [1]. Accidental ingestion or impaction of dentures in this context is rare, with only a few published reports.

Fort *et al.* [4] described two post-stroke patients with prolonged pharyngeal denture impaction, undetected on plain radiographs and only revealed on laryngoscopic examination. Slade and Larsen [5] reported a 75-year-old woman who spontaneously expectorated a partial denture one week after MCA infarction, with rapid resolution of symptoms. Kim *et al.* [6] reported a hemiplegic patient whose videofluoroscopic swallowing study revealed a forgotten denture lodged in the hypopharynx, with subsequent clinical improvement after removal.

Compared with these post-stroke cases, our patient's management and outcome differed substantially. In prior reports, once recognized, dentures were removed endoscopically or even expelled spontaneously, with uneventful recovery. In contrast, our patient had an intra-esophageal partial denture with metallic clasps complicated by early esophageal perforation, rendering endoscopic extraction impossible and prompting cervical esophagotomy with feeding jejunostomy. This contrast emphasizes the role of timely recognition and the risk posed by sharp/rigid components in driving mucosal injury and perforation; when perforation is suspected, operative management should take precedence over further endoscopic attempts.

Our patient is unique in that the denture caused esophageal perforation requiring surgical extraction, a complication not previously reported in stroke patients to our knowledge. Diagnosis was initially delayed, as symptoms were attributed to aspiration pneumonia and stroke-related dysphagia. The case also highlights the diagnostic challenge: while full acrylic dentures are radiolucent [2], partial den-

tures with metallic clasps may still be detectable on radiographs [3]. In our case, the acute respiratory condition justified performing CT scanning directly, which not only confirmed the foreign body but also demonstrated early esophageal perforation. This underlines the importance of adapting diagnostic strategy to both the prosthesis material and the clinical context. CT remains the most reliable modality in unstable patients, providing a comprehensive evaluation of foreign body location and complications.

From a preventive perspective, all stroke admissions with dysphagia should include a structured oral examination and precise documentation of denture status (present/removed/missing), prosthesis type (full acrylic vs partial with metallic clasps), and—if removed—the storage location; in patients with impaired consciousness, these details should be confirmed with family or caregivers. Embedding this protocol into nursing checklists and stroke care pathways can reduce diagnostic delays; if a prosthesis is unaccounted for or ingestion is suspected, prompt ENT/dental evaluation is warranted.

4. Conclusion

Accidental denture ingestion is a rare but potentially severe complication in stroke patients with dysphagia. Clinicians should maintain a high index of suspicion in cases of unexplained dysphagia or respiratory compromise, particularly when dentures are missing. Partial dentures with metallic clasps may be visible on plain radiographs, but CT imaging remains the gold standard in acute settings. Early recognition and prompt management are essential to prevent life-threatening complications such as esophageal perforation.

Ethics Approval and Consent to Participate

We gained the written informed consent of the patient to use her clinical information and photographic material for the publication.

Conflicts of Interest

The authors declare no competing interests.

References

[1] Martino, R., Foley, N., Bhogal, S., Diamant, N., Speechley, M. and Teasell, R. (2005) Dysphagia after Stroke: Incidence, Diagnosis, and Pulmonary Complications. *Stroke*, **36**, 2756-2763. https://doi.org/10.1161/01.str.0000190056.76543.eb

[2] Firth, A.L., Moor, J., Goodyear, P.W.A. and Strachan, D.R. (2003) Dentures May Be Radiolucent. *Emergency Medicine Journal*, **20**, 562-563. https://doi.org/10.1136/emj.20.6.562

[3] Newton, J.P., Abel, R.W., Lloyd, C.H. and Yemm, R. (1987) The Use of Computed Tomography in the Detection of Radiolucent Denture Base Material in the Chest. *Journal of Oral Rehabilitation*, **14**, 193-202. https://doi.org/10.1111/j.1365-2842.1987.tb00709.x

[4] Fort, S., Batty, G.M. and Wilkins, W.E. (1989) Prolonged Pharyngeal Impaction of

Dentures Following Stroke. *Stroke*, **20**, 1748-1750. https://doi.org/10.1161/01.str.20.12.1748

[5] Slade, P.M.E. and Larsen, M.P. (2015) Dysphagia, Dysphonia and Sore Throat Following Cerebral Infarction: An Unexpected Cause. *BMJ Case Reports*, **2015**, bcr2015210091. https://doi.org/10.1136/bcr-2015-210091

[6] Kim, H., Kim, C., Kim, M., Joa, K., Chung, H. and Jung, H. (2014) Forgotten Denture in a Hemiplegic Patient. *American Journal of Physical Medicine & Rehabilitation*, **93**, 267-271. https://doi.org/10.1097/phm.0b013e3182a92f2f