



Case Report

Hard to Swallow: Remembering to Check for Impacted Dentures in Elderly Patients Presenting with Swallowing Difficulty

Priyavarshini Ramesh¹, Cerys Morgan², Michael Fertleman², Louis John Koizia^{2*}

Abstract

Background: Swallowing difficulty is a common issue associated with hospital admission and can be due to a variety of causes, including accidental ingestion of dentures. This case highlights the importance of ensuring aids such as dentures are accounted for early in elderly patients presenting with swallowing difficulty before subjecting them to medical treatment and investigations for other causes.

Case Presentation: We present the case of a woman in her late 80s who was originally admitted for pelvic fractures and developed new dysphagia and odynophagia with associated voice hoarseness and pooling of saliva. She was initially treated for supraglottitis with antibiotics and dexamethasone with minimal response. Following administration of glycopyrronium, her dentures were visualised in the hypopharynx, and removed. The patient was able to recover her swallow and return to baseline oral intake.

Conclusions: This case highlights the importance of accounting for aids commonly used in the elderly including dentures and ensuring that their presence or absence is documented to prevent misdiagnosis.

Keywords: Ear; Geriatric Medicine; Healthcare Improvement and Patient Safety; Nose and Throat/Otolaryngology

Background

Swallowing difficulty is prevalent in elderly patients admitted to hospital and can be due to a variety of causes, including but not limited to frailty, respiratory infections, oral thrush and gastro-oesophageal reflux disease [1]. 20% of the UK population wear dentures, increasing to 59% among elderly population with care needs, to preserve their ability to enjoy a wide range of food [2,3]. The risk of accidental denture ingestion is increased in the context of elderly patients who may be disoriented and agitated during hospital admissions and subsequently be unable to provide a clear account of swallowing their dentures; as such, diagnosis tends to be challenging [4]. Ingestion of dentures have been shown to result in bleeding, gastrointestinal obstruction, perforation and fistula formation [5].

Case Presentation

An 89-year-old woman was admitted to hospital following a fall at home, from which she sustained pelvic fractures which were being conservatively managed. She developed a new oxygen requirement while an inpatient and chest x-ray revealed right-sided consolidation and bibasal effusions which were treated as a hospital-acquired pneumonia. Five days into her admission, the patient was seen by the speech and language therapy (SALT) team due to ongoing cough while eating. During this assessment, it was noted she had ill-

Affiliation:

¹St Mary's Hospital, Imperial College Healthcare NHS Trust, London, UK

²Centrale Perioperative and Ageing Group, Imperial College London, UK

*Corresponding author:

Louis John Koizia, Centrale Perioperative and Ageing Group, Imperial College London.

Citation: Priyavarshini Ramesh, Cerys Morgan, Michael Fertleman, Louis John Koizia. Hard to Swallow: Remembering to Check for Impacted Dentures in Elderly Patients Presenting with Swallowing Difficulty. Archives of Clinical and Biomedical Research 7 (2023): 157-159.

Received: January 15, 2023

Accepted: January 24, 2023

Published: March 09, 2023

fitting top and bottom dentures and was deemed to have mild oral dysphagia secondary to coughing. Three days later, she reported new odynophagia exacerbated by swallowing, associated with a dry cough, increasing shortness of breath and dysphonia. Upon SALT review, there was no clear cause found, with differentials including throat infection, reflux and thrush. She displayed overt risk of aspiration with oral intake; a nasogastric tube (NGT) was inserted the same evening and she was started on treatment for an aspiration pneumonia. The patient developed delirium and removed the NGT twelve hours post-insertion as well as removing her intravenous cannula. She was then referred to ENT as she had increasing upper airway secretions with a requirement for regular suctioning. In the first ENT review, she showed no signs of stertor or stridor. Fiberoptic nasendoscopy (FNE) showed significant pooling of saliva in the hypopharynx with swelling of the supraglottis and poor cough effort. Vocal cord movements were normal. This was initially treated as supraglottitis with potential risk of airway compromise and she was given antibiotics and dexamethasone. Given her frailty, poor progress in hospital and worsening acute issues, she was reviewed by the palliative care team who advised a guarded prognosis and anticipatory medications were prescribed. She was administered 200 micrograms of subcutaneous glycopyrronium for symptom control of her secretions. ENT reviewed the following day with repeat FNE, which revealed a significant reduction in secretions due to the glycopyrronium and better visualisation of the upper airway, with dentures visible in the pharynx superior to the vocal cords. The dentures were removed with video laryngoscope and McGill forceps. Repeat FNE showed normal vocal cords and no further airway trauma. Discussion with the patient's daughter retrospectively revealed the patient's dentures had been reported as lost on the morning of her developing the odynophagia and nursing staff were unable to locate them. The patient's oral intake was subsequently monitored and increased in a controlled manner. Two weeks later, the patient returned to baseline oral intake.

Discussion

Literature search for 'swallowed dentures' among case reports between 1972 to 2022 on PubMed returned 250 results, of which 106 were unique case reports or case series on swallowed dentures. Dysphagia is by far the most common presenting complaint, with other associated symptoms being tenderness in the throat, retrosternal discomfort, and choking [5,6]. Denture impaction can cause significant patient distress and the physiological response to foreign body in the pharynx can mimic the increased secretions, nausea and respiratory distress in patients nearing end of life. Most crucially, as with other cases of foreign body obstruction, impacted dentures in the oropharynx can cause airway compromise. Pertinent to elderly populations, it is worthwhile excluding denture

impaction as a source of swallowing difficulty. Three cases described by Hashmi et al [4] similarly described patients presenting with sore throat who were unable to provide definitive histories, had FNEs with significant saliva pooling and were ultimately found to have impacted dentures, with one resulting in critical haemorrhage. Literature suggests that impacted dentures can be difficult to diagnose initially and greater awareness of this risk in the denture-wearing population should be encouraged [7,8]. Early recognition and removal lessen the risk of complications of trauma, such as oedema, tissue pressure necrosis, and secondary infection. Daniels et al [5] found a statistically significant increase in risk of complications with delayed removal of dentures beyond 4 days post-ingestion. Finally, careful attention is required in cases where there may be iatrogenic dislodging of dentures such as endotracheal intubation in emergency settings and even NGT insertion in ward-based settings [9].

Conclusion

Clear documentation of location of aids such as dentures must be encouraged, with extra care to be taken when inserting endotracheal tubes or NGTs in patients with dentures, especially if ill-fitting. Denture ingestion should be considered early on if elderly patient with known dentures develops new odynophagia, and an urgent referral to SALT and ENT may be appropriate.

Acknowledgements

Written consent was obtained from the patient for publication of this case report.

Availability of Data and Materials

Data sharing is not applicable to this article as no datasets were generated or analysed during the current study.

References

1. Thiyagalingam S, Kulinski AE, Thorsteinsdottir B, et al. Dysphagia in Older Adults. *Mayo Clin Proc* 96 (2021): 488-497.
2. Steele J, O'Sullivan I. Executive Summary: Adult Dental Health Survey 2009. London: The Health and Social Care Information Centre (2011).
3. National Dental Epidemiology Programme for England: oral health survey of mildly dependent older people (2016).
4. Hashmi S, Walter J, Smith W, et al. Swallowed partial dentures. *J R Soc Med* 97 (2004): 72-75.
5. Daniels J, Oremule B, Tsang W, et al. A 10-Year Review of the Complications Caused by Ingested and Aspirated Dentures. *Ear Nose Throat J* 100 (2021): 574-580.
6. Ganesh V, Drever S, Agilinko J, et al. Management of a

- swallowed denture: our experience with 34 patients. *Ger Med Sci* 19 (2021).
7. Bandyopadhyay SN, Das S, Das SK, et al. Impacted dentures in the oesophagus. *J Laryngol Otol* 128 (2014): 468-474.
 8. Mughal Z, Charlton AR, Dwivedi R, et al. Impacted denture in the oesophagus: review of the literature and its management. *BMJ Case Rep* 12 (2019): e229655.
 9. Hamilton EJ, MacVane C, Strout TD. Dysphagia after Cardiopulmonary Resuscitation: A Case of Aspirated Dentures. *J Emerg Med* 58 (2020): 959-961.