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A 10 Year Review of the Complications of Ingested and Aspirated Dentures

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Abstract : Introduction: Dentures are common and are an intervention for both physical and psychological symptoms associated with tooth loss. However, the humble denture can cause morbidity and mortality if swallowed or aspirated. Numerous case reports document complications including hollow viscus perforation, fistula formation and airway compromise. The purpose of this review was to examine the literature documenting cases of swallowed or aspirated dentures over the past ten years to investigate factors that contribute to developing complications. Methods: A Medline literature search was performed to identify cases of denture ingestion or aspiration for over ten years. Data was collected to include patient, appliance and temporal factors that may contribute to developing complications including hollow viscus perforation, fistula formation, abscess, bowel obstruction, necrosis, hemorrhage and airway obstruction. The data was analyzed using observational and inferential statistics in the form of Chi-Squared and Pearson correlation tests. Results: Eighty-five cases of ingested or aspirated dentures were identified from 77 articles published between 1/10/2009 and 31/10/2019. Fourteen articles were excluded because they did not provide sufficient information on individual cases. Complications were documented in 37.6% of patients, and 2 cases resulted in death. There was no significant difference in complication risk based on patient age, hooked appliance, level of impaction, or radiolucency. However, symptoms of greater than 1-day duration are associated with an increased risk of complication ($p=0.005$). Increased time from ingestion or aspiration to removal is associated with an increased risk of complications, and the p-value remains significant up to and including day 4 ($p=0.017$). Conclusions: With denture use predicted to rise complications from the denture, ingestion and aspiration may become more frequent. We have demonstrated that increased symptom duration significantly increases the risk of developing complications. Additionally, we established the risk of developing complications is significantly reduced if the denture is removed with four days of aspiration or ingestion. By actively intervening early when presented with a case of swallowed or aspirated dentures, we may be able to reduce the morbidity associated with this unassuming device.

Keywords : aspiration, denture, ingestion, endoscopic foreign, body removal, foreign body impaction
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