



Broken and Wandering Teeth, an Easily Overlooked Issue in Major Maxillofacial Trauma

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Case Presentation

A 16-year-old girl fell from a height of five stories. On arrival at the emergency department, she was comatose. Other vital signs were a respiratory rate of 16 breaths/min, heart rate of 140 beats/min, blood pressure of 76/43 mmHg, and temperature of 37.3°C. Physical examination revealed a markedly swollen face, bleeding from the right ear, lower lip, and chin complex lacerations. There were open fractures of both legs, and a 12 cm laceration over her right knee. Resuscitation was provided, including endotracheal intubation to secure her airway. A tooth-shaped radiopaque object was identified at the junction between the chest and abdomen on the post-intubation chest X-ray (Fig. 1). The exact location of the foreign bodies (FB) was later confirmed to be in the stomach by computed tomography (CT) scans (Fig. 2).

Discussion

Maxillofacial trauma is an increasing injury, mostly affecting the young to the middle-aged male population.¹ Although there are regional variations, falls, assaults, and road accidents, sports injuries are the most common causes of maxillofacial trauma.¹ Securing the airway is the first task in managing patients with life-threatening injuries. However, it is often extremely difficult in maxillofacial trauma because the disarranged anatomy and significant bleeding often make endotracheal intubation difficult.² Furthermore, fractured teeth or dislodged dentures may be swal-

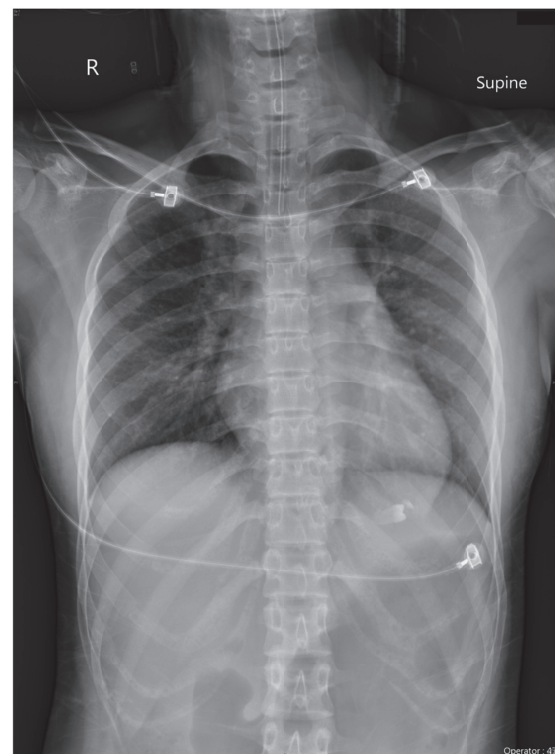


Fig. 1. The post-intubation chest X-ray. A tooth-shaped radiopaque object could be found at the junction between the chest and abdomen.

lowed or aspirated which could result in bowel obstruction, perforation, pneumonia, respiratory failure, and death.^{3,4}

In a patient with significant maxillofacial trauma, diagnosis of aspiration or ingestion of fractured teeth or dislodged denture could be difficult. The

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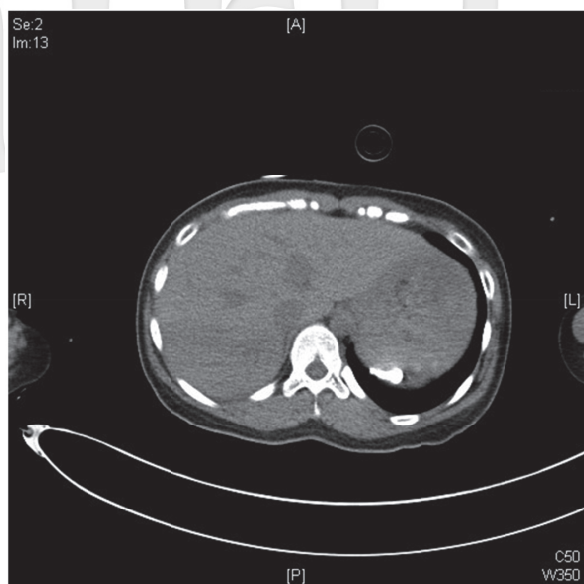


Fig. 2. Computed tomography scans confirmed the intra-gastric location of the foreign body.

history is not always indicative, especially in patients with impaired consciousness or at extreme ages. Symptoms and signs may be subtle, or masked by multiple, attention distracting injuries. Without early detection and removal, serious complications are often inevitable.

The airway should be secured first if there is any respiratory symptom or sign. Emergent cricothyrotomy should be performed immediately if endotracheal intubation cannot be achieved in a timely fashion. Adequate imaging examinations are thereafter necessary, especially for patients with broken teeth or lost dentures. For natural teeth, plain radiography may be adequate to assess the presence and location. However, some dental prostheses are radiolucent which make detection difficult.⁵ CT scan is indicated in patients with suspected radiolucent FB, visceral perforation, or other complications.^{1,2}

FB in the throat may be removed directly if it can be reached by direct or laryngoscopic visualiza-

tion. Most of the tracheobronchial FB can be safely removed by a flexible bronchoscope, and in some cases, especially children, by a rigid bronchoscope. Most of the ingested FB can pass uneventfully once through the esophagus. However, early endoscopic retrieval is indicated when the FB is retained in the esophagus or when dangerous objects such as sharp objects, disc batteries, magnets, or a magnet and other ferromagnetic metals are ingested.⁶ The surgical treatment is reserved for cases in which endoscopy fails or those with complications.

During the primary survey in patients with maxillofacial trauma, remember to check and remove any fractured or loosen teeth and dentures. It can reduce unnecessary complications of aspiration or ingestion.

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