

## CASE REPORT

## Pharyngeal Aspiration of Complete Upper Denture in 90-Year-Old Man; a Case Report

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### Abstract

Foreign body aspiration is unusual in adults, except those who are debilitated or have neuropsychiatric disorders. It can be a life-threatening situation and it often requires a high index of suspicion, because the diagnosis can be obscure. Prompt diagnosis and intervention through foreign body retrieval are critical to prevent significant morbidity and mortality. We present a case of denture aspiration by a debilitated 90 years old man. He had aspirated his complete upper denture to pharynx causing incomplete obstruction with pleasure whistling respiratory sound, dyspnea, dysphagia and dysphonia. He underwent successful retrieval of the dental plate manually by fingers with complete resolution of symptoms.

**Key words:** Pharyngeal; aspiration; foreign body; case report

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### Introduction:

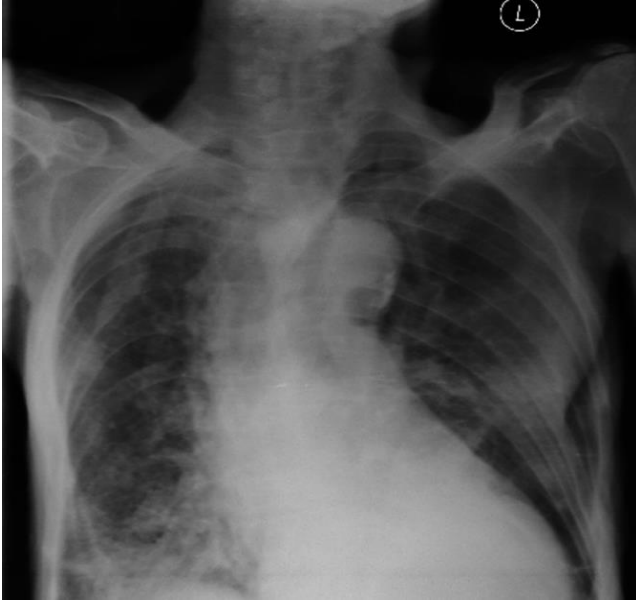
Foreign body aspiration can be a life-threatening condition if the aspirated object is large enough to cause complete airway obstruction necessitating prompt intervention (1). However, the diagnosis may be delayed when the history is atypical or when clinical and radiologic findings are misleading or overlooked by the physician. In spite of that, nearly all pharyngeal and airway foreign bodies are considered as medical emergencies (2, 3). We are presenting an old man who aspirated a large foreign body and misdiagnosed as a case of aspiration pneumonia.

### Case Presentation:

A 90-year-old man was brought to the emergency room due to acute onset of severe generalized weakness, sudden onset of dyspnea, pleasure whistling in respiration, acute dysphagia to both liquids and specially solids and inability to speak, from 2 days ago. He had one time vomiting at onset of the symptoms. He had medical history of achalasia, recurrent pneumonia in last months and head trauma 2 months ago with sub-arachnoids hemorrhage and several convulsions. On arrival to hospital, his vital sign were as oral temperature: 37.8°C, heart rate: 100/minute, respiratory rate: 16/minute, blood pressure: 100/80 mmHg with 95% oxygen saturation on room air. He was completely alert but could not talk. In

physical exam except for severe cachexia and superficial ulcers on two forearms, there was no other finding. Lung exam was incomplete due to severe illness and superficial respiration. He did not have stridor and wheezing! None of examiners noticed to his respiration with pleasure whistling and the history of losing his upper dental prosthesis from two days ago. Posterior-anterior chest x-ray revealed bilateral consolidations with the most prominence in the right middle lobe (Figure 1). Chest computed tomography (CT) scan revealed the same finding as well as bilateral pleural effusion (Figure 2). He was admitted to the Infectious Disease ward with diagnosis of aspiration pneumonia. In next day, his dyspnea gets worst so made the corresponding physician to take a lateral neck radiography (Figure 3). A large foreign body was lodged above epiglottis between oropharynx and hypopharynx. On physical examination, his lost upper complete upper denture with 5 x 5 centimeter size was seen in his pharynx behind the tongue and was manually extracted with fingers. His three days dyspnea, whistling, inability to talk and dysphagia was dramatically improved. He was treated for aspiration pneumonia due to last convulsions and was discharged in a stable condition after one week. In third visit after two months, he had no alimentary and respiratory sign and symptoms with good condition.

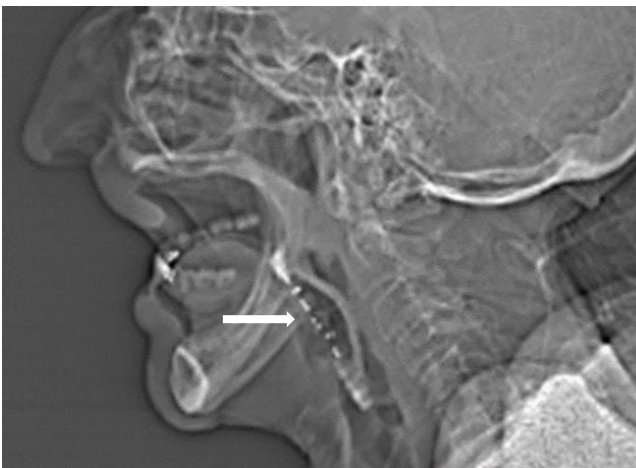




**Figure 1:** Posterior-anterior chest x-ray of patient



**Figure 2:** Axial chest computed tomography scan of patient



**Figure 3:** Lateral neck x-ray of patient, white arrow shows aspirated dentures.

### Discussion:

Adults account for only about 20% of the reported cases of foreign body aspiration and most of them are seen after the sixth or seventh decade of life, when airway protective mechanisms lose their proper function (4, 5). The clinical features of foreign-body aspiration in geriatric patients are usually more obscure than in non-geriatric adults, which may lead to long delay in diagnosis ranged from 1 month to 3 years (6). In the adult population, such aspiration is most commonly secondary to unconscious accidental ingestion during general anesthesia, sedation, intoxication, seizures or neurologic disorders affecting the oropharynx. Foreign bodies have a tendency to lodge in the right main stem bronchus as it is more vertical and larger in diameter than the left main stem bronchus (3). Clinical management of an aspirated foreign body includes early recognition, acute emergency interventions, supportive care, and preventive anticipatory guidance. The diagnosis of foreign body aspiration can be difficult, especially if the patient does not recall an aspiration episode. Foreign body aspiration has variable clinical manifestations, ranging from trivial symptoms to irreversible lung damage and life-threatening infection, atelectasis, and massive hemoptysis. Patients may present with a history of fever, breathlessness, or wheezing or with features of a non-resolving pneumonia. On physical examination, these patients may have decreased breath sounds on the side with the foreign body or localized wheezing, or they may be asymptomatic. The clinical triad consists of wheezing, coughing, and diminished or absent breath sounds that is considered to be diagnostic of foreign body aspiration can be present based on the size and site of foreign body (6, 7). Although plain films may be interpreted as normal, radiopaque foreign bodies may be seen. On chest x-ray, unilateral hyperinflation, lobar or segmental atelectasis, and mediastinal shift, or pneumomediastinum may be evident (7, 8). Many foreign bodies are incidentally seen on radiographic imaging ordered for symptoms mistakenly attributed to other medical conditions including asthma and unresolving recurrent pneumonia (9). If a diagnosis of foreign body aspiration is delayed, a retained foreign body may result in unresolving pneumonia, lung abscess, and bronchiectasis. Also, formation of granulation tissue around the foreign body may occur and may resemble bronchogenic carcinoma (10). A CT scan is helpful in visualizing radiopaque foreign bodies and alveolar collapse. It can also demonstrate airway foreign bodies that are radiolucent on plain radiographs. CT scans can depict a foreign body within the lumen of the tracheobronchial tree and the 3-dimensional position of the foreign body within the thorax (7). Because foreign body aspiration can mimic other respiratory conditions, a high index of suspicion is necessary in all patients with pneumonia, atelectasis,

or wheezing with an atypical course, especially in patients who are unresponsive to medical therapy (11). This case is one of the unusual cases of such a large foreign body aspiration that the diagnosis was delayed for about three days. He was too debilitated to say about his denture in pharynx and chest X-ray could not reveal the plate because it was made from a plastic material and had no radiopaque metal.

**Conclusion:**

Diagnosis of foreign body aspiration may be retarded because of nonspecific signs specially if there is no recollection of the episode. The physician may be suspicious of this condition, even if the patient history and imaging obscure the clinical picture and pay attention to present history well and do a complete physical examination.

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