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Rare But a Serious Complication during Dental Implantation: Implant Aspiration

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Abstract:

Tracheobronchial foreign objects are life threatening situations. Although they occur more frequently in children, they may occur in any age group. Sometimes, when aspiration episode cannot be received in patients who have persisting dry cough and labored breathing, foreign object aspiration must be suspected. In addition to the listening signs in diagnosis, chest radiography is sufficient most of the time. In this case, a 54-year old male patient is mentioned who aspirated implant material and subsequently reported to the emergency clinic with the complaints of labored breathing and dry cough.

Key words: Aspiration, Foreign Bodies, Implants, Respiratory System, Lung, Cough, Humans.

Introduction

The most frequent reasons of upper respiratory tract obstructions are foreign objects [1]. They often occur in early ages [2]. In adult patients, coughing and labored breathing may be observed. In asymptomatic patients, symptoms may take months to develop and subsequently chronic liver infection, bronchiectasis or pulmonary abscess may occur. Since the clinical findings of adult patients are not specific, diagnosis depends on history received from the patient and suspicion of foreign object. Depending on the size of the bronchial foreign object, they may obstruct the respiratory tract and lead to sudden death [2-4].

They occur more frequently during dental prosthesis aspiration and nutrition intake [5]. Death rate due to foreign object aspiration is 1.3/100,000. Complications often occur in adults with a variety of clinical settings: elderly patients, intensive care, alcohol and chronic illness [1]. However aspiration can develop in completely normal persons during laughing when there is something in the mouth and during speaking [6,7].

Case Report

A 54 year old male patient presented to our hospital for evaluation of labored breathing and dry cough. Our patient was previously healthy patient till dental implant was performed in dentistry for molar tooth loss. He recalled that he suddenly aspirated the implant screw at the moment of breathing during dental implant treatment and subsequently coughing and labored breathing developed. On

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examination, patient was found to have bilateral equal air entry with wheezing sounds.

Object was seen in the left lung lobe in the chest radiograph [Fig.1]. An 8.5 F size thickness object was observed in supine position by rigid bronchoscopy under general anesthesia. Right main bronchus was viewed by a camera however foreign object was not observed. In the most distal part of the sub-lobe of the left main bronchus, foreign body was seen and the dental implant material was removed [Fig.2,3]. The procedure was terminated without any complication. The awaken patient was put into intensive care unit. One day later check radiography was taken, which was normal. The patient was discharged after stabilization.

Discussion

Bronchial foreign object aspirations in adults are serious life threatening situations. The most frequently encountered symptoms are sudden suffocation (48%), coughing (37%), fever (31%), and labored breathing (26%) [3]. Symptoms of patients must be well studied. Otherwise, persistent cough, wheezing and frequent liver infections may lead to serious complications [8]. In our case, patient was suffering from severe dry cough in addition to suddenly developed labored breathing during dental implantation to upper molar tooth that was missing. The patient noticed the event and applied to the emergency clinic and the diagnosis was made following clinical suspicion.

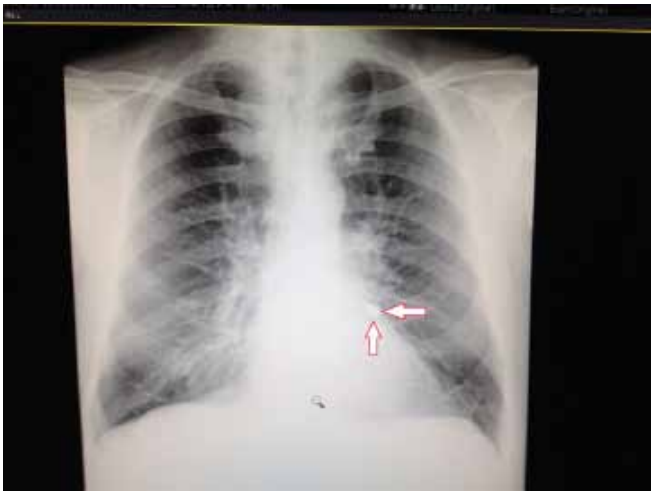

Fig.1: Chest X-ray showing object in left lung lobe.

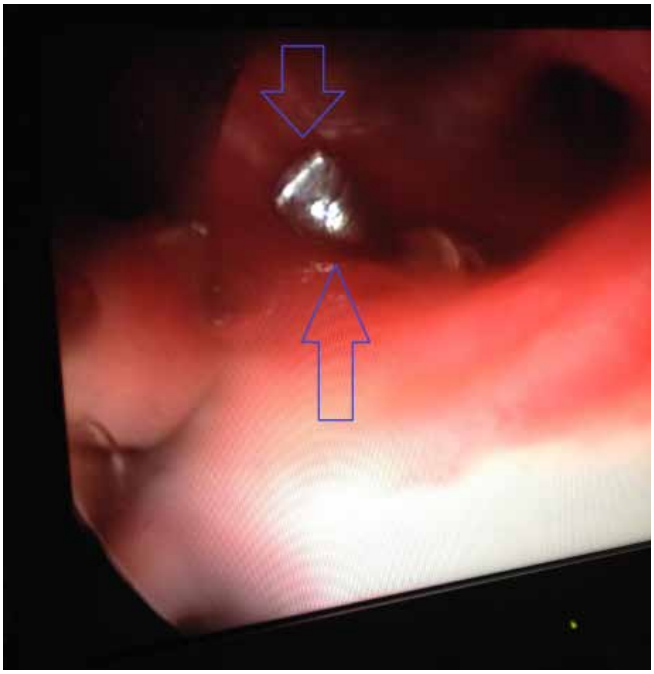

Fig.2: Implant material was seen in left sub lobe lung bronchus by rigid bronchoscopy.

Fig.3: Dental implant material.

Radio-opaque bronchi foreign objects can be viewed by posterior-anterior chest radiography (PA-CR). In case they are large enough to obstruct the airway, they can lead to atelectasis and can be observed by PA-CR. Sometimes aeration augmentation in PA-CR can occur especially in children [2]. In our case, we did not determine aeration augmentation, and determined a foreign object in left sub-lobe, and distinct liver atelectasis was not seen.

Whether fiber optic bronchoscope or rigid bronchoscope should be used for foreign object removal is a controversial topic. Rigid bronchoscopy is preferred in children and flexible bronchoscopy is recommended in adults since peripherally situated bronchi foreign objects are reached with difficulty. Rigid bronchoscopy is preferred for treatment of foreign bodies located in bronchus to enable full control of airway under general anesthesia [9,10]. In our case, a foreign object was seen in left sub-lobe bronchus by rigid bronchoscopy under general anesthesia and removed by forceps.

In conclusion, bronchi foreign objects should be taken by anamnesis in all ages and removed right away after clinical and radiological evaluations.

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