



ATYPICAL CASE PRESENTATION OF FOREIGN BODY IN BRONCHUS

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ABSTRACT

Foreign body aspiration is most commonly present in children than the adults. Neglected and untreated foreign body aspiration in adults cause chronic cough and may remain asymptomatic for long time. Unless there is high degree of suspicion and history, this cases in adults FB aspiration may easily be missed and treated as upper respiratory tract infections for long time. So a careful detail history is necessary in adults patients with chronic cough and with long term upper respiratory chest infections. We present the atypical case of FB aspiration in adult with atypical symptoms with no auscultation changes and X-ray changes. The aim of this report is to highlight the importance of detailed history taking which maximum take 5 more minutes and specifically for adults FB aspirated patients who can missed diagnosed easily whenever no specific history present.

KEYWORDS

foreign body aspiration, rigid bronchoscopy ,flexible bronchoscopy.

INTRODUCTION-

Foreign body aspiration rate as similar as before in population in India. Pediatrics incidence rate of foreign body aspiration is much more common than adults. It's rarely present in the adult people. Incidentally aspirated foreign body mainly lodge in the bronchus than the trachea and secondary bronchus. The presenting symptoms patient's come with are mainly correlated with the where foreign body lodge in respiratory tract. When foreign body present in the trachea, patients come with choking, expiratory stridor and cyanosis dependent on obstruction foreign body created in trachea. When foreign body presents in bronchus, patients come with chronic cough and long standing neglected foreign body cause pneumonia. On auscultation, the air entry absent in airway where lodged foreign body causes complete bronchus obstruction whereas wheezing with decrease air entry presents in partially obstructed bronchial lumen. The investigation needs to diagnose foreign body in bronchus are chest X-ray and CT SCAN. In X-RAY, consolidation and collapse of lungs present in airway side which obstructed by FB. CT scan is the confirmatory investigation for aspiration of foreign body. Management of foreign body in trachea and bronchus done with emergency bases with cooperation of ENT Surgeon and Anesthetic team by rigid or video assisted bronchoscopy.

Case Presentation

A 47 year old Hindu male patient coming from Lower socioeconomic class, residing at Dwarka district came to our hospital with chief complain of chest discomfort and heaviness for last 2 months duration with coughing at night for last 5 days. No history of difficulty in breathing, difficulty in swallowing, blood in sputum, weight loss and fever. Patient visited multiple private doctors for above complain, not clinically improved, finally patient refer to ENT doctor for throat examination as patient having cough at night.

On examination, patient have normal Respiratory rate, normal Oxygen saturation, No respiratory distress or stridor, Bilateral air entry was equal and clear. So in further throat examination with Hopkin's Telescope bilateral vocal cord normal and larynx normal. On radiological examination, X ray neck with chest of the patient shows no changes. All medical investigation also were normal. With great confusion and curiosity, We take further detailed history, On detailed history patient revealed that he has history of missing one denture teeth 2 month back which he doesn't remember that it was aspirated, ingested or misplaced in sleeping.

So we advised CT scan Neck with Chest was to rule out foreign body. CT scan report was suggestive of a well defined hyper-dense material (Average HU: 120-130 HU) content of size (8.5*11 mm) in right main bronchus (figure-1) (figure-4). We immediately posted patient for rigid bronchoscopy. Rigid bronchoscope negotiated up-to 35cm right main bronchus, Foreign body seen and removed (figure-2). Symptoms like chest discomfort and coughing were relieved on next day morning. Post operative no complications and discharged in 2 days.

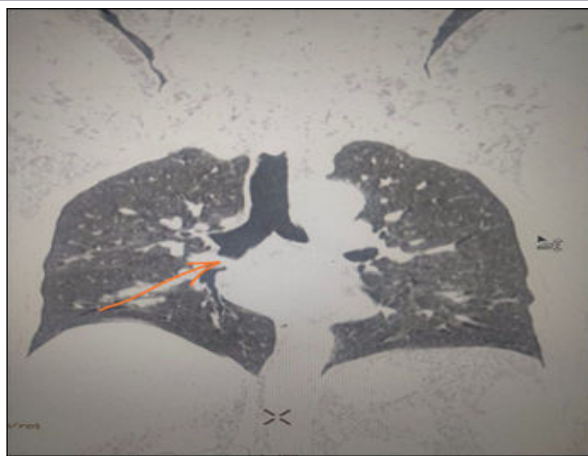


Figure 1- Patient's CT Scan Shows Foreign Body In Right Side Main Bronchus

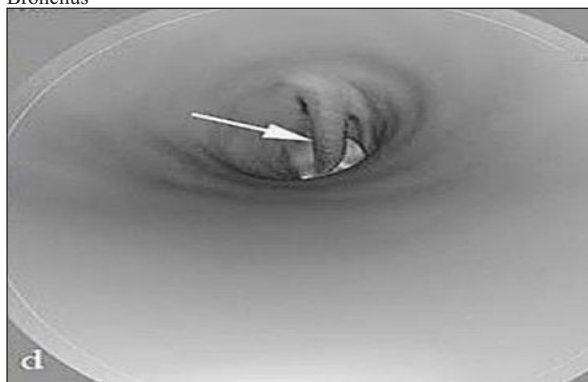


Figure-4 Patient's CT Scan Showing 3D Reconstruction Of FB In Bronchus



Figure 2- Foreign Body Denture Removed By Bronchoscopy

DISCUSSION

The first published case of endoscopic extraction occurred on March 1897, when a German farmer experienced dyspnea, cough and hemoptysis after aspirating a pork bone. Using a modified Mikulicz-Rosenheim esophagoscope (a rigid tube illuminated with the a mirror) and rigid forceps, Gustav Killian removed the splinter from the right main bronchus [1].

Aspiration of foreign bodies occurs frequently in children; 75% of cases occur in children younger than 3 years of age [2]. However, FB aspiration does occur in adults and elderly people as well [3], although the incidence is not known. Symptoms in adults depend on the site of the FB impaction. The classical triad of cough, dyspnea, and cyanosis occurs in the small percentage of patients [4]. A non asphyxiating FB may be asymptomatic. Many of these objects are wedged distally and patients often do not remember choking, the aspiration, or any precipitating event [5]. Thus, FB aspiration is commonly misdiagnosed in adults. Diagnosis can be delayed for months to years from the initial event [5,6] and often results from accidental discovery when bronchoscopy is performed to evaluate a chronic cough, hemoptysis, or a slow resolution of pneumonia [7]. Risk factors for bronchoaspiration of FB in adults are older age, abuse of sedative medication, neurological disorder, mental retardation, trauma with loss of consciousness, dental care, alcoholism and medical procedures such as those resulting from cleaning or manipulation of tracheotomy cannula [8].

FB aspiration, while uncommon in adults, still accounts for about 1 in 400 bronchoscopy procedures. This makes it difficult for an individual provider to develop experience with the available tools and techniques required for successful FB extraction [9]. The vast majority of the FB in adults can be extracted safely with flexible bronchoscopy and the use of forceps and baskets. However, the use of more advanced tools often not available in the community setting and the occasional need to utilize rigid bronchoscopy suggests that FB extraction should be performed in the facility that has advanced tools and trained personnel available whenever possible [9].

Studies have shown that the right bronchus is more commonly affected than the left bronchus in makes lesser angle of with trachea and bigger diameter relative to the left bronchus [10].

Depending on the degree of obstruction, a plain radiograph may show over inflation or an area of atelectasis [11]. This happens due to check valve mechanism, where air trapped and is not expired out, leading to hyperinflation of the affected lung.

Other findings could be rib flaring, mediastinal shift, lobar collapse, unilateral emphysema or atelectasis; demonstrating radio-opaque FB is uncommon. A normal history and/or CXR is not uncommon in suspected foreign body aspiration [12]. A CXR had low diagnostic accuracy. It is difficult to correctly diagnose FBA without a bronchoscopy, a negative rate of 25-47% is expected [12].

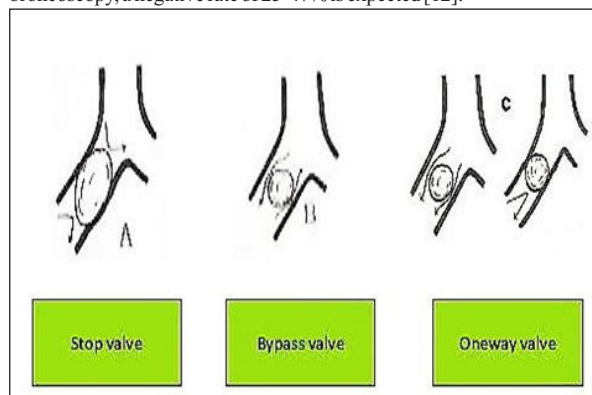


Figure-3 Pathophysiology FB causes in the bronchus

So why this case was unusual? Incidence of foreign body in bronchus is more common in children, Rarely present in adult. Normally Foreign Body causes three type pathophysiology in lungs. It's leads to x-ray changes like hyperinflation of lungs, auscultation changes like expiratory wheeze and decrease air entry in affected bronchus. In our case no any sign or symptoms seen presents as normal case of

aspiration of foreign body. As patient was adult with no specific history and atypical symptoms, we didn't even suspect FB aspiration. Patient aspirated denture, which was previously made of polymethylacrylate a plastic form, a radiolucent material. So X-ray may not identify it. Second there was no X-ray changes present because of the shape and size of FB, it didn't cause the complete obstruction of bronchus. Due to pressure or irritation to the bronchus it only caused chest discomfort. In our case no any changes present in x-ray and auscultation due to shape of foreign body, wider bronchus and foreign body stuck like this in bronchus which don't create complete obstruction and air freely go in and out (figure-3).

CONCLUSION

FB aspiration in adults population rarely present and often missed. A specific targeted question and high degree of suspicious require in meticulous history taking whenever a adult patient come with chronic cough and other pathological causes already ruled out.

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