

Large Key in Adult Airway for more than Two Years

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ABSTRACT

Introduction: Airway foreign bodies are encountered mostly in children, most common presentation being acute with cough, respiratory distress, stridor, wheeze and in extreme cases cardio respiratory arrest. Sometimes distal airway foreign bodies present as chronic cough, with features resembling pneumonia. In adults foreign bodies are rare in airways due to well developed cough reflex. Mostly their presentation is acute. It's very rare to have a large foreign body in trachea of an adult for around two years and minimal symptoms.

Case Report: Adult male patient presented to us with chronic cough but he was never investigated with X Ray Chest in the past. X ray Chest showed large key, which was removed using bronchoscopy.

Conclusion: Role of X ray chest in patients with chronic cough is very important and should be one of the first investigations in such cases. CT Thorax is useful in cases with diagnostic dilemma and for planning definitive treatment after diagnosis. Most of these airway foreign bodies can be managed by bronchoscopy.

Keywords: Trachea, Airway Obstruction, Foreign Bodies

INTRODUCTION

Airway foreign bodies are mostly symptomatic and have acute presentation. Children are mostly affected by this life threatening problem¹ due to their poor cough reflex and habit of taking things in mouth while playing and sleeping. Variety of foreign bodies ranging from vegetable seeds to parts of toys to small batteries are swallowed by them in airways. This problem is encountered rarely in healthy adults due to their well developed cough reflex.² In adults this problem is generally seen in intoxicated and semi-conscious states.³ We are discussing a 30 year male who presented in OPD with history of chronic cough since last one year for which he was being given local medicines. After a year of developing symptoms, he was referred to us and when X Ray chest was done us it showed a metallic key in his airway which he remembered keeping in mouth around two years back, when he was under treatment for a psychotic disorder. The key was then successfully removed using Bronchoscope.

CASE REPORT

The patient, 30 years male, presented in our hospital with complaints of chronic cough since one year, for which he was taking home medications. His X Ray chest and CT Scan showed a large metallic key in his airways (Figure-1). His wife told that he was under psychiatric treatment two years back. During that time one day he told her that he has eaten metallic key, but no one believed him. At that time he had cough which subsided after few days of local treatment. Thereafter he remained asymptomatic for around a year before developing chronic cough for which he was given local treatment without any X Ray Chest before being referred to us. It was planned that Bronchoscopy removal will be attempted first, if fails then it will be removed by right

thoracotomy and bronchotomy. He was induced with propofol and scoline and intubated with 6.5 mm size endotracheal (ET) tube. Flexible bronchoscope was inserted along side of ET tube (Figure-2). He was kept on spontaneous ventilation with oxygen, nitrous and halothane. Key was seen to be present in lower trachea and extending into right main bronchus. Foreign body removal forcep was used to slightly dislodge the impacted key from airway mucosa and then it was removed along with bronchoscope and ET tube. The key was around 7 cm in length and rusted (Figure-2). He was discharged after two days with uneventful recovery. His post procedure X Ray Chest showed no Pneumothorax or collection. There were no signs of surgical emphysema.

DISCUSSION

Foreign Bodies in Airways are more common in children. Joshua D. Rovin et al¹ states that younger children are at the highest risk for accidental foreign body aspiration, due to: 1) tendency to put small things into their mouths; 2) tendency to play with small things, toys with parts which are small and round; and 3) in absence of molars can't chew food properly. Only 15% of foreign body aspirations occur among children older than 5 years of age. According to Joshua D. Rovin et al by far, the objects aspirated most frequently are organic or food matter. Adults have generally good cough reflex and it's rare to have an asymptomatic foreign body lying in trachea for so long.² Mathiasen RA et al discussed the asymptomatic foreign body in trachea of a child, which is a very rare. The same was removed under bronchoscopy guidance. For radio opaque objects radiographs can be diagnostic, but in cases of radiolucent foreign bodies, which are far commoner, plain X ray chest may be misleading.⁴

Fidkowski CW et al⁵ states that only 11% of the foreign bodies are radio-opaque on X-Ray, with chest radiographs being normal in 17% of children in a series of 12,979 cases. If X ray chest is normal and doubt of foreign bodies persist, one must get CT Scan with virtual bronchoscopy done. The other alternative can be diagnostic bronchoscopy for such patients, which has been traditional gold standard. Fidkowski CW et al discussed anesthetic techniques used to manage such cases. Induction while maintaining spontaneous ventilation is commonly practiced to minimize the risk of converting a partial proximal obstruction to a complete obstruction. Controlled ventilation with IV drugs and paralysis allows for suitable rigid bronchoscopy.

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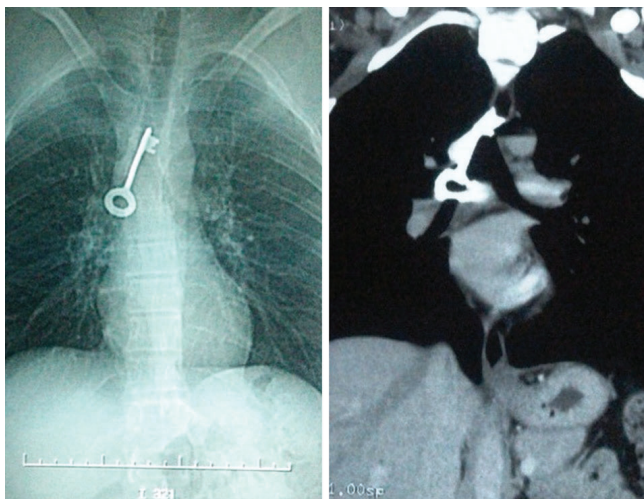


Figure-1: X Ray Chest and CT Scan showing metallic key in trachea and right main bronchus.



CONCLUSION

This case illustrates the importance of proper history taking and utility of x ray chest, CT scan and bronchoscopy in cases of chronic cough with diagnostic dilemma. Most such airway foreign bodies can be removed under bronchoscopy (rigid or flexible) guidance, surgical removal by thoracotomy is rarely required in cases of embedded foreign body, perforated foreign body, foreign bodies in distal bronchus when forceps are not able to reach upto there.

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