

Case report

Unusual Airway Foreign Body In An 11-Year-Old Boy

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Abstract

Foreign body in early pediatric life is common, owing to the child's developing dentition and maturity of swallowing mechanism. As the child grew older, the nature of foreign body inhaled might changed. Most of them are due to carelessness and improper habit of holding foreign material in between the lips. We report a case of a boy who inhaled a soft-board metal pin, which was retrieved after multiple attempts due to the nature of the pin that easily slipped and dislodged into distal bronchioles.

Key Words: Foreign body, airway, pediatric, metal pin

Introduction

Foreign body aspirations are common in pediatric population. It usually affects children around 5 years old, with large number of incidence were in below the age of 3¹. Food particles are the most commonly documented airway foreign body among these group of children. Among them, nuts, raisins, sunflower seeds, pieces of meat are most frequently reported.

Case Report

An 11-year-old boy allegedly inhaled a soft-board metal pin while he was holding it between the lips. He initially complained of retrosternal pain. He denied any history choking or coughing, noisy breathing or voice changes. The pain subsided later on.

He presented himself to the Emergency department with a clear history of foreign body inhalation. A chest radiograph was obtained (Figure 1). An opaque needle was seen at the level of carina. He underwent emergency direct laryngoscopy and bronchoscopy under general anaesthesia. A foreign body was noted at the carina with the sharp pointed end in upward direction. Few attempts of

removal were performed with rigid endoscope and optical foreign body forceps but failed. Similarly attempts were made by flexible endoscope inserted through the endotracheal tube which also failed. All these attempts had caused the slippery needle to displace into the right and then left primary bronchioles.

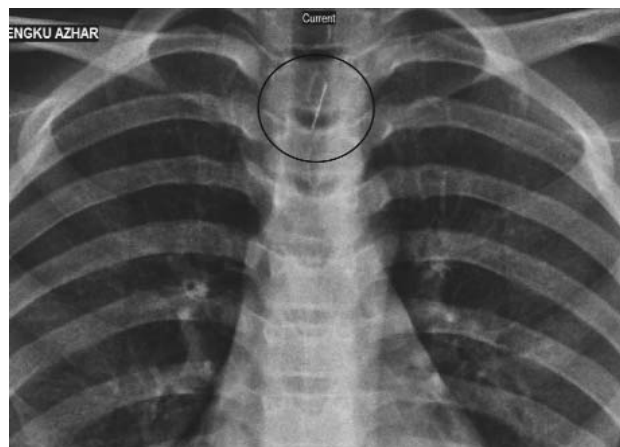


Figure 1: Opaque pin (in circle) seen above the carina, in which during surgery noted to be dislodged more distally.

Finally, utilizing the direct rigid bronchoscope and the flexible endoscope forceps (inserted through

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the suction port of the rigid bronchoscope), the tip of the pin was grasped and successfully removed together with the bronchoscope. The patient was well post-operatively. He was discharged home after he has completed 3 doses of intravenous steroid.

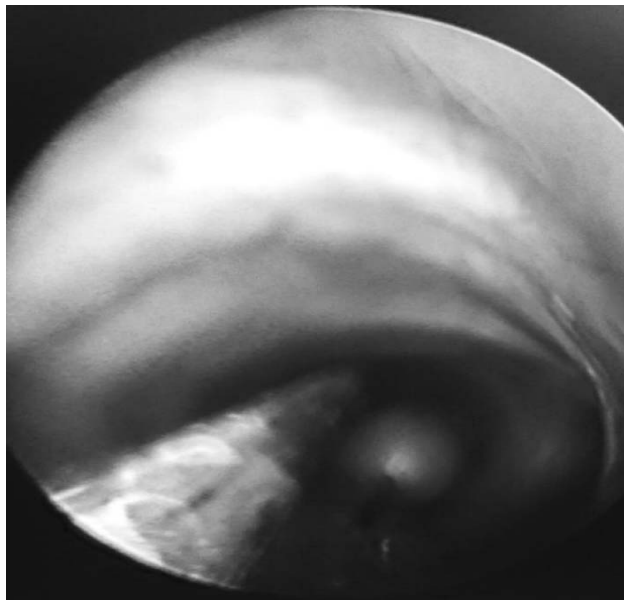


Figure II: Soft board pin foreign body dislodged into primary bronchiole with sharp end pointed upwards, after slipped from the first attempt of removal (Note the lumen of the adjacent primary bronchiole)

Discussion

Children particularly in the earlier age are more prone to inhale a foreign body due few factors namely inadequate chewing due to absence of

molars, uncoordinated swallowing mechanism besides curiosity carelessness². A more mature children in late pediatric life tend to be saved physiologically but the carelessness factor persist.

In the index case, the patient was holding the pin between his lips. This habit is widely practiced among carpenters and labors that hold nails between their lips before hammering them. Another type of sharp foreign body airway, scarf pins were recognized as a cultural hazard in the Middle East young girls³. The habit of holding sharp pins and nails between the lips should be discouraged as it can lead to unnecessary catastrophic outcomes.

The removal of this type of foreign body sometimes is not a straightforward one-step bronchoscopy. It was due to the nature of foreign body itself as well as its configuration that predisposes it to more distal bronchiole slip. Repeat bronchoscopic trials and thoracotomy were reported to be needed in some cases⁴. As demonstrated our case, the soft-board pin especially the sharp pointed end is easily slipped resulting its dislodgement into more distal airway lumen, which is more narrower and made visualization and retrieval became more difficult. Few attempts were made in this case which would predispose the patient to airway edema. In some center, magnetic extractor was shown to be helpful for retrieval of these type foreign bodies in the distal airways³.

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