

An unusual tracheal foreign body - A Case Report

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Abstract: Foreign body (FB) inhalation is often encountered by emergent otolaryngology services.¹ Their occurrence is influenced by mode of living, customs, habits and environment.² An undiagnosed FB in trachea is very rare and lethal. Inhalation of cap of vermilion case and presenting at the proximal trachea is rarer. As often in the airway FB gravitate to bronchi, tracheal FB is a rare presentation and also rare in the literature. Children who are not given proper individual attention at an early age are more liable to inhale FB. FB aspiration is associated with significant morbidity.¹ They present as emergencies and require skilful management.²

Introduction

Foreign body (FB) inhalation is an extremely serious and life threatening condition in children. It is the most common cause of accidental death among the children under the age one year. The risk of FB inhalation is very high up to the age of 3 years.¹ Prevention and early diagnosis can be lifesaving.³ Complications of airway FB depend on the site, size, shape, nature and duration of foreign body.⁴ Even though inhalation of FBs in the airway has been recognized for many years, undiagnosed and unsuspected FBs still occur in the airway, causing severe complications and threatening to life due to the delay in diagnosis.⁵ Delayed diagnosis will cause a significant morbidity and mortality. Here we are presenting a case of an unusual tracheal foreign body.

Case Report

A female child of 4 years age was brought to Department of E.N.T. PGIMS, Rohtak with history of dry cough, difficulty in breathing and vomiting. History of child playing with case of vermilion. Clinical examination revealed nasal flaring, use of accessory muscles and stridor. Auscultation of chest revealed equal air entry on both sides. There were no symptoms of upper respiratory tract infection. X-ray chest and neck were normal. CT scan of the neck with chest revealed the double ring shadow at proximal part of trachea with normal lower airways.

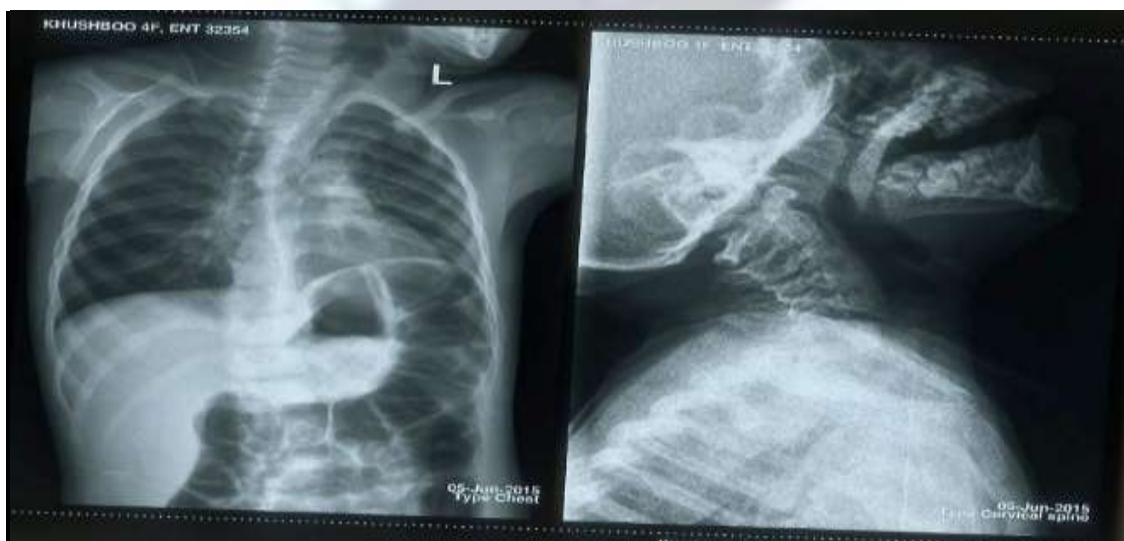


Fig. 1: x-ray chest and soft tissue neck. No foreign body seen



Fig. 2: CT scan chest showing double ring shadow in trachea



Fig. 3: showing foreign body (cap of vermilion case).

Bronchoscopy was done under general anaesthesia. The upper end of the foreign body was visible in the subglottic area. The foreign body was hollow from inside, open at upper end and closed at lower end, not obstructing the trachea completely. The foreign body was removed by grasping posterior part of upper end. It was a cap of vermilion case. It measured about 2.0cm in length and 1 cm in width. It was hollow from inside. Fig. III: Showing foreign body (cap of vermilion case).

Discussion

Inhalation of the airway FB is a potentially life threatening condition. Before the introduction of bronchoscopy, there was high mortality and morbidity. After the advent of bronchoscopy, it was drastically reduced. The first demonstration of the feasibility of bronchoscopy was the removal of FB from a bronchus by Gustav Killian, a German Otolaryngologist in 1897.⁶ Mostly FB inhalation occurs in children between 1 and 3 years of age. The reasons are; they lack molar teeth necessary for proper grinding of food, they have minimal controlled coordination of swallowing and immaturity in laryngeal elevation with glottis closure; they have tendency to explore the environment by keeping the objects in the mouth; they are usually running and playing at the time of ingestion.^{7,8}

Sudden onset of cough, dyspnoea and wheezing are the major symptoms of FB in the airway. Most of the airway foreign bodies can be easily diagnosed, if history of FB inhalation is available, but in some patients, the diagnosis is doubtful in the absence of witnessed history of aspiration. In our case, there was doubtful history of FB aspiration. Signs and symptoms depend on the site, size, shape, nature and duration of the airway foreign body. But sudden onset of difficulty in breathing and presence of wheeze prompted us to advice CT scan.

If the FB is situated in the trachea, the child is at risk for complete airway obstruction and should be taken seriously and immediately shifted to the operating room for FB removal. Most airway foreign bodies (80–90%) are lodged in the bronchi because their size and configuration allow passage through the larynx and trachea.⁹ Larger FB becomes impacted in the larynx and trachea. Tracheal foreign bodies account for only 4% of aspirated foreign bodies.¹⁰ In our case, cap of vermilion case was large enough, unable to pass below the tracheal level.

Conclusion

Inhalation of a FB is a potentially lethal event. The importance of early diagnosis and rarity of tracheal FB are stressed here. In paediatric patients careful history, meticulous examination and imaging are essential for early diagnosis for airway foreign body. X-rays are usually not of much help in case of radio translucent foreign bodies. CT scan and Bronchoscopy should be considered. The purpose of this case report is to add to the list of unusual foreign bodies of tracheo-bronchial tree.

References

- [1]. Ahad A, Majid A, Ahmad N, Manhas N. An unusual tracheal foreign body — a case report Indian J Otolaryngol Head Neck Surg. 1999 Dec; 52(1): 100–10.
- [2]. Swain SK, Panigrahi R, Mishra S, Sundaray C, Sahu MC. An unusual long standing tracheal foreign body – A rare incidence. Egyptian Journal of Ear, Nose, Throat and Allied Sciences.
- [3]. Aytac A, Yurdakul Y, Ikizler C, Olga R, Saylam A. Inhalation of foreign bodies in children .J Thorac Cardiovasc Surg, 74 (1977), pp. 145–151.
- [4]. Mofenson HC, Greensher J. Management of the choking child. Pediatr Clin North Am, 32 (1985), pp. 183–192
- [5]. Karakoc, Karadag B, Akbenlioglu C, Ersu R, Yildizeli B, Yukseln M. Foreign body aspiration: what is the outcome? PediatrPulmonol, 34 (2002), pp. 30–36.
- [6]. Mohammad MS. The clinical spectrum of foreign body aspiration in children Inter Paediatric, 19 (2004), pp. 14–19.
- [7]. Abdel S. Undiagnosed bronchial foreign body – golf tee J Laryngol Otol, 94 (1980), pp. 671–675.
- [8]. Clerf LH. Historical aspects of foreign bodies in the air and food passage Ann Otol Rhinol Laryngol, 61 (1952), pp. 5–17.
- [9]. Flint PW, Haughey BH, Lung VJ, Niparko JK, Richardson MR, Robbins KT, Thomas JR (Eds.). Foreign bodies of the airway and esophagus. Cummings Otolaryngology Head and Neck Surgery, vol. 1 Mosby, Philadelphia (2010), pp. 29.
- [10]. Saquib M, Khan A, Al-Bassam. A Late presentation of tracheobronchial foreign body aspiration in children J Trop Pediatr, 51 (2005), pp. 145–148.
- [11]. Aydogan LB, Turncer U, Soylu LV, Kiroglu M, Ozsahinoglu C. Rigid bronchoscopy for the suspicion of foreign body in the airway Int J Pediatr Otorhi, 70 (2006), pp. 823–828.
- [12]. Banjar AA, Mansour R, Al-Shamani, Al-Harb J. Long standing tracheal Foreign Body in children: a case report. Egypt J Ear Nose Throat Allied Sci, 15 (1) (2014), pp. 57–59.