

Laryngoscope Bulb – Accidental Bronchial Foreign Body

Seshadri L N, MS¹, Arun Kumar Haridas, MCh (CTVS)², Sathyanarayan P S, MD³

¹Senior Resident, Department of surgery, St John’s Medical College Hospital, Bangalore, Karnataka, India

²Professor & Head , Department of Cardiothoracic Surgery, St John’s Medical College Hospital, Bangalore, Karnataka, India

³Professor, Department of Anaesthesiology , St John’s Medical College Hospital, Bangalore, Karnataka, India

Corresponding Author: Seshadri L N, MS¹, ¹Senior Resident, Department of surgery, St John’s Medical College Hospital, Bangalore, Karnataka, India

Type of Publication: Case Report

Conflicts of Interest: Nil

Abstract

We report a rare case, only once previously reported in literature, of bronchoscopic retrieval of laryngoscope bulb aspirated into the right lower bronchus during emergency endotracheal intubation.

Introduction

Foreign body lodgement of laryngoscope bulb in bronchus during emergency endotracheal intubation has been only once reported in literature.(1) This bizarre yet serious complication of a everyday life saving procedure can worsen the medical condition of critical patient and add to interventions, costs, and medicolegal issues.

We present this case report of successful retrieval of the laryngoscope bulb from the right lower bronchus, grasped with a biopsy forceps using rigid bronchoscopy, of a young adult female referred to our institution.

Case report

A twenty six year old female patient was referred to our institution with accidental aspiration of laryngoscope bulb into the tracheobronchial tree during emergency endotracheal intubation for respiratory failure following organophosphorus poisoning. The loss of the bulb and

aspiration was detected during the intubation process and lodgement as foreign body in the tracheobronchial tree was subsequently confirmed by Chest X Ray. Chest X Ray revealed no gross pulmonary abnormality except for the radioopaque foreign body lodged in the right hilar region.

The patient was hemodynamically stable on ventilator support when referred and transferred to our institution, 48 hours after the accident. Under anesthetist guidance, rigid bronchoscope was introduced and the bulb was found lodged in the right lower bronchus. It was retrieved in toto by holding the screw end of the bulb with a biopsy forceps. The bulb, forceps and bronchoscope were removed as one unit. The patient tolerated the procedure well.

Discussion

Foreign body lodgement of laryngoscope bulb in bronchus during emergency endotracheal intubation has been only once reported in literature. This bizarre yet serious complication of an everyday life saving procedure can complicate the medical condition of critical patient and add to interventions, costs, and medicolegal issues.

Adults seldom aspirate foreign bodies and majorities occur during early childhood. In 1897, Gustav Killian first bronchoscopically extracted an aspirated pig bone from the tracheobronchial tree. Since then, bronchoscopy has become common practice and remains the gold standard in the evaluation, diagnosis, and treatment of adults and children with FB aspiration, with extraction rates nearing 100%. Foreign bodies, which cannot be grasped by endoscopic forceps, can be removed by thoracotomy and pneumotomy(2).

Rigid bronchoscopy remains the standard procedure for the removal of foreign bodies, due to larger diameter than flexible counterpart, therefore allowing blood aspiration, thick secretion aspiration, and patient ventilation. In practice, rigid bronchoscopy should always be performed as first-line procedure in the presence of a radiopaque, obstructive foreign body.

The place of flexible bronchoscopy in the management of foreign body is being redefined, both in diagnosis and treatment, with extraction of a bronchial foreign bodies being reported with variable success rates. (3)

Complications during removal of airway foreign bodies via bronchoscopy from the tracheobronchial tree may be encountered even by experienced hands. The most commonly reported complications include failure in removing the foreign body, laryngeal edema, pneumothorax, pneumomediastinum, subcutaneous emphysema, tracheotomy or assisted ventilation necessity for laryngeal obstruction or respiratory distress, hypoxic brain events, bradycardia, cardiopulmonary arrest and even death. (4)

Acknowledgement: nil

References

1. A Perel, E Katz, J T Davidson. Fiberbronchoscopic Retrieval of An Aspirated Laryngoscope Bulb. *Intensive Care Med.*1981; 7,143-144

2. Rodrigues AJ, Oliveira EQ, Scordamaglio PR, Gregório MG, Jacomelli M, Figueiredo VR. Flexible bronchoscopy as the first-choice method of removing foreign bodies from the airways of adults. *J Bras Pneumol.* 2012 May-Jun; 38(3), 315-20.
3. A Hitter, E Hullo, C Durand, C A Righini. Diagnostic value of various investigations in Children with suspected foreign body aspiration. *European Annals of Otorhinolaryngology, Head and Neck diseases.* 2011; 128, 248—252
4. Abhishek Jaswal , Utpal Jana, Pradip Kumar Maiti. Tracheo-Bronchial Foreign Bodies: A Retrospective Study and Review of Literature. *Indian J Otolaryngol Head Neck Surg.* Jan 2014; 66(Suppl 1):S156–S160.

Figure

