Original Research Paper

Volume -10 | Issue - 5 | May - 2020 | PRINT ISSN No. 2249 - 555X | DOI : 10.36106/ijar

ENT

A RARE CASE OF AN UNDETECTED IATROGENIC FOREIGN BODY (BROKEN INTUBATION STYLET) IN RIGHT MAIN BRONCHUS OF A FEMALE ADULT: A CASE REPORT.

Dr. Folorunso David*	MBBS,FWACS,FMCORLConsultant ENT Surgeon Department of ENT/Head & Neck Surgery PMB228,University of Abuja Teaching Hospital Gwagwalada-Abuja *Corresponding Author
Nafiu MA	
Afolabi AR	
Aliu OO	
Akinmola AO	
Ibekwe TS	

ABSTRACT **Background:** Iatrogenic endobronchial foreign bodies are presentations seen commonly among paediatrics and rarely in adults. Cases among adults could be associated with poor mental state, manipulative dental procedures, or pellets from gun shots.

Case: We report the case of a 32-year-old female who presented in the general out-patient clinic [GOPD] with a diagnosis of chronic chest infection keeping in view tuberculosis. This was later found out to be a broken stylet used during her previous intubation. This is 2nd documentation Worldwide, first documentation was in Iran. Radio imagine is key in making correct diagnosis of foreign body in the airway.

Conclusion: Ideal stylets for insertion of endotracheal tubes, which must have an aluminum core with PVC coating (low friction surface) must be made available and improvised-metallic objects which over a repeated usage could break up within endotracheal tube, discouraged. Furthermore, a routine inspection of the stylet before and after intubation must be a routine.

KEYWORDS : Stylet, endobronchial foreign body, bronchoscopy.

INTRODUCTION

Iatrogenic endobronchial foreign bodies are presentations seen commonly among paediatric age group, in adults though reported but on rare occasions.[1] Occurrence in adults could be linked to either poor mental state,[2] manipulative dental procedures, or pellets from gun shot. There was also a documentation on broken stylet reported in Iran during endotracheal intubation.[3] In most of theatre facilities in the developing countries, ideal stylets for insertion of endotracheal tubes, which must have an aluminium core with PVC coating(low friction surface) are not ready available, hence, improvised-metallic object are commonly used, which over a repeated usage could break up within Endotracheal tube. Most times these foreign bodies are discovered almost immediately due to the respiratory embarrassment.[4] Few foreign bodies are delayed in their presentation, probably due to mild respiratory symptoms such as a cough, dry sputum production, fever, chest pain sometimes haemoptysis which present like common chest infections such as simple pneumonia or asthma, tuberculosis .[4,5]

We report the case of a 32-year-old female who presented in the general out-patient clinic [GOPD] with a diagnosis of chronic chest infection keeping in view tuberculosis. This was later found out to be a broken stylet used during her previous intubation. This is 2nd documentation Worldwide, first documentation was in Iran. Radio imagine is key in making correct diagnosis of foreign body in the airway.

CASE REPORT

A 32-year-old new mother presented to the GOPD with a history of fever, right side chest pain, cough with haemoptysis for about six weeks duration, she had an exploratory laparotomy six weeks prior to presentation on account of suspected small bowel obstruction due to adhesions which occurred a week after having a caesarean delivery of her baby. She subsequently developed the above symptoms during admission initially cough which had gradually worsened after discharge to chest pain, haemoptysis and fever. She had self-prescribed medications such as cough syrup but to no improvement.

In the general out- patient clinic, the patient was in moderate pain, dyspnoeic and had recurrent haemoptysis. Physical examination revealed her lungs were clear on auscultation. Oxygen saturation was 98%. Her posterior-anterior and lateral chest X-ray revealed an incidental finding of a radio-opaque broom like foreign body obliquely lying within the right bronchus (Fig.1& 2).

She had an urgent bronchoscopic procedure performed which was both diagnostic and therapeutic. It confirmed the presence of a metallic object (broken piece of anaestheticstylet measuring 12cm) lying within the right bronchus surrounded by some granulation tissue. There was no evidence of perforations. The foreign body was subsequently removed (Fig. 3 and 4).

Immediate management included antibiotics, analgesia, and frequent nebulization with salbutamol daily. Few days post operation, all symptoms resolved, she was stable and her Oxygen saturation was still 99%. Repeat chest radiology while still on admission revealed a clear chest radiograph (Fig.5).

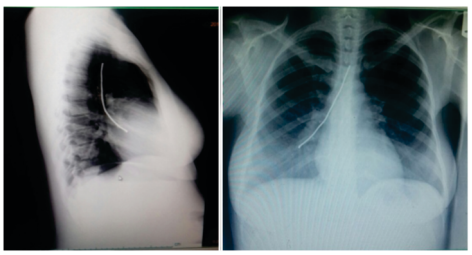

Fig.1 and 2: Lateral and posterior-anterior chest x-ray; endo-tracheal tube metallic stylet

Fig.3 and 4: Broken part of endo-tracheal tube metallic stylet and complete metallic stylet post procedure

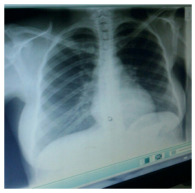

Fig 5: Posterio-anterior chest X-ray; post bronchoscopy

DISCUSSION

A stylet used to aid passage of endotracheal tube insertion during intubation had broken off and was left unnoticed after extubation, which subsequently migrated to the right bronchus. Fortunately, the stylet had remained quiescent without penetrating the bronchus or lung tissue, but had progressively caused symptoms of pain, persistent cough and recurrent haemoptysis. As at the time when bronchoscopy was done, the main body of the stylet was it available in the theatre, which revealed the source of the foreign body(Fig:4)

Foreign body in the airway is highly dangerous and could lead to sequelae of events which ultimately could lead to mortality.[6] Iatrogenic right endobronchial foreign body due to an unnoticed broken stylet from endotracheal intubation is a rare and findings are less reported.[7] **Only one case reported before now in the literature.** Delayed presentation can contribute to the misdiagnosis of such incident [8,9] as seen in this index patient. Uzun O. and Altintas N. reported on a case of an elderly patient with a four- year history of chest symptoms that was treated as persistent severe asthma until a definite diagnosis of FB in the trachea at the referral ospital.[8] Another case reported by Tabuena et al revealed a 60 year old male who presented with asthma-like due to surgical gauze migration from his mediastinum into his trachea symptoms persistent for two decades of post surgery for tracheal stenosis .[10] Some patients who present with such symptoms may be treated for primary lung disease initially and hence results in wrong management.

In this patient management, several militating factors aided fast resolution of her symptoms; Chest radiograph played an important role in the diagnosis.[11] A quick response to the patient management also played a part in aiding resolution of symptoms as experienced by this patient. Bronchoscopy has still proven to be a well-accepted diagnostic and therapeutic instrument for the management of endobronchial foreign body management. Other adhoc therapy such as frequent nebulisation with salbutamol, antibiotic and analgesia use was beneficial to her quick recovery. Patient tolerated the procedure well, had fast recovery and was discharged home after two days on admission.

CONCLUSION

We suggest that anaesthesiologists should stick to ideal stylet and proper safety check of surgical instruments used during procedures should be ensured. High suspicious index should be observed when a patient presents with unresolved respiratory symptoms following a recent past medical history of any invasive procedure.[9]

REFERENCES

1. Madsen A, Madsen PH. Recurrent pneumonia due to endobronchial foreign body. BMJ Case Rep. 2014;03:2013–5.
2. Farahnak MR, Araghi S, Nikakhlagh S, Saki N. Toothbrush: A Report of an Unusual Foreign Body. Iran J Otorhinolaryngol. 2015;27(80):247–9.
3. Fuso L, Visca D, Lauretis A De, Valente S. A case of bronchial aspiration of a foreign body in a healthy adult: misdiagnosed with asthma and resolved with flexible bronchoscopy. Am J Respir Crit Care. 2011;
4. Sentürk E, Sen S. An unusual case of foreign body aspiration and review of the literature. Tüberküloz ve toraks. 2011;59(2):173–7.
5. Ip O. Bronchial foreign body misdiagnosed as pulmonary tuberculosis. 2013;40(4):434–7.
6. Ac O, Folorunsho D, Ts I. Actualities of Management of Aural , Nasal , and Throat Foreign Bodies. 2015;5(2).
7. Sharma A, Jain V, Mitra JK, Prabhakar H. A rare cause of endotracheal tube obstruction: a broken stylet going unnoticed--a case report. Middle East J Anaesthesiol. 2008 Feb;19(4):909–11.
8. Uzun O, Altintas N. A very unusual iatrogenic tracheal foreign body. Respir Med CME. 2011;4(3):146–8.
9. Dhar V, Al-Reefy H, Dilkes M. Case report - An iatrogenic foreign body in the airway. Int J Surg. 2008;6(6).
10. Tabuena RP, Zuccatosta L, Tubaldi A, Gasparini S. An unusual iatrogenic foreign body (surgical gauze) in the trachea. Respiration. 2008;75(1):105–8.
11. Pinto A, Scaglione M, Pinto F, Guidi G, Pepe M, Del Prato B, et al. Endobronchial aspiration of foreign bodies: current indications for emergency plain chest radiography. Radiol Med. 2006;111(4):497–506.