

The Role of Bronchoscopy for Successful Removal of a Chronic Aspirated Foreign Body after Twenty Years

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Abstract

Introduction: A Man with complaints of chronic cough, and shortness of breath, with history of inhaled metal bullet 20 years ago. Chest x-ray thorax revealed a foreign body and pleural effusion.

Case Description: Patient is a 58 years old male with complaints chronic cough and shortness breathe, he had inhaled metal bullet in 20 years ago. Chest x ray revealed a foreign body and pleural effusion dextra. Fiber optic bronchoscopy shon corpus alienum metal bullet-in medial lobus dextra, and it was retrieved using basket forcep

Discussion: the diagnosis of foreign body aspiration as some patients may not offer a clear history of aspiration or may present late. In addition, malignancy, lung tuberculosis, chronic pneumonia can be misdiagnosed to patients, fiber optic bronchoscopy has been secure and effective procedure in the therapy of foreign body in the airway

Keywords: BSOL, forcep basket, foreign body

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1. Background

In healthy adults, foreign body aspiration is uncommon; however, it is more common in children and the elderly. Clinical symptoms in some patients can be subtle and go unnoticed for years, particularly if a small foreign body lodges in the lobar or segmental bronchi³. When a bronchoscopy is performed to evaluate a recurring cough, hemoptysis, or nonresolving pneumonia, occult foreign bodies may be discovered by chance⁴. Patients can also be misdiagnosed with chronic pneumonia, bronchitis, asthma, or

cancer. As a result, persistent pneumonia that does not respond to antibiotics should cause a bronchoscopic examination to rule out obstruction from a foreign body or tumor.⁵

2. Case Report

A 58 years old man presented with 3 months chronic cough. He also suffering recurrent episodes of shortness of breath. He presented to Emergency room due to shortness of breath. He said a history of inhaled metal bullet 20 years ago. He worked as farmer, and denied any history of smoking, alcohol, or drug use. On

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examination, vital sign were stable. Chest auscultation revealed decreased breath sounds in all right lung field, and the remainder of the examination was normal.

Laboratory finding, CBC were 16.700/ml, tumor marker CEA 0,38ng/ml, NSE 23,91 ng/ml. Pleural fluid analysis were red colour, eritrocyte 72.000/ml, leucocyte 1.907/ml, PMN 43%, MN 57%, LDH 1.898IU/L. Chest X-ray showed foreign body in medial lobus dextra and pleural effusion dextra with atelectasis component (Figure 1 a and b). Sputum rapid molecular test were Mtb not detected. pleural fluid cytology were class II, mesothel cell with inflammation, malignancy

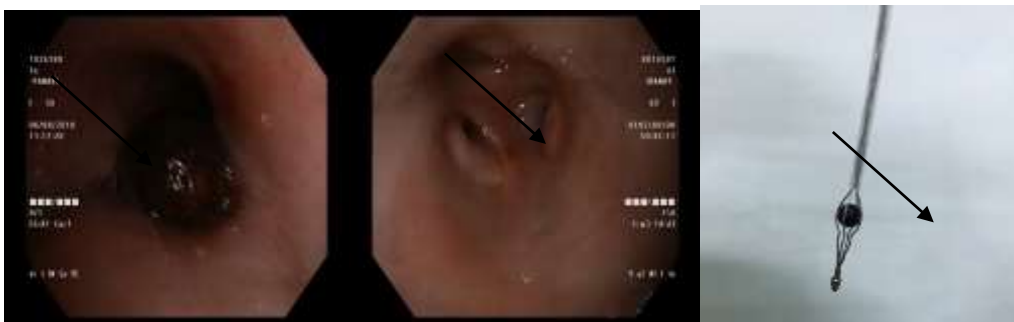
cell is not found. Pleural fluid culture were not growth colony. Sputum gram culture and DST were stapylococcus coagulase negative.

Fiber optic bronchoscopy revealed corpus alienum metal bullet-in medial lobus dextra with granulation (Figure 2a) and stenoting obstruction in inferior lobus (Figure 2b), the patient underwent plexibel fiber optic bronchoscopy and metal bullet foreign body was retrieved using basket forcep (Figure 2c). Granulation tissue occluding was treated with levofloxacin, pleural effusion was treated with pleural fluid evacuation. The patient reported immediate improvement in his symptoms.



(a) (b)

Fig 1. CXR anterior position (a) lateral position (b), the arrow shown metal bullet



(a) (b) (c)

Fig 2. Corpus Alienum with Granulation in Medial Lobus Dekstra (a). Stenoting Obstruction in Lower Lobus Dekstra (b). Corpus Alienum Buckshot in Basket Forcep (c)

3. Discussion

For a number of reasons, diagnosing foreign body aspiration in patients may be challenging. For example, certain patients do not have a specific history of aspiration or may present late, months or years after the initial aspiration case^{1,2}. The most common symptom of a foreign body is chronic cough, which affects two-thirds of patients. Hemoptysis, fever, and dyspnea are some of the other symptoms that are widely mentioned. Other commonly reported symptoms include hemoptysis, fever, and dyspnea⁴. Nonresolving pneumonia, atelectasis, and, if the foreign body is metal, direct visualization on a chest X-ray are all radiographic characteristics of foreign body aspiration⁶. The removal of the foreign body is needed for definitive treatment of foreign body aspiration. A versatile bronchoscopy is the first step in the treatment of suspected foreign body aspiration in adults⁴. In one series of patients undergoing bronchoscopy for suspicion of foreign body aspiration, the foreign body was encountered in 49 of the 65 patients (75%)⁷. The incidence of complications recorded in the literature ranges from 10% to 20%, with pneumonia being the most common³. Pleural effusion can be caused by recurrent pneumonia or a malignancy process so further exploration is needed.

4. Conclusion

In our case highlights and shows that chronic foreign body is still missing and ignored, fiber optic bronchoscopy has been secure and effective procedure in the therapy of foreign body in the airway, pneumonia has been the most common complication with accompanied pleural effusion.

References

1. M. B. Ramos, M. Botana-Rial, E. Garc´ıa-Font´an, A. Fern´andezVillar, and M. G. Torreira, "Update in the extraction of airway foreign bodies in adults," *Journal of Thoracic Disease*, vol. 8, no. 11, pp. 3452–3456, 2016.
2. L. Lin, L. Lv, Y. Wang, X. Zha, F. Tang, and X. Liu, "The clinical features of foreign body aspiration into the lower airway in geriatric patients," *Clinical Interventions in Aging*, vol. 9, pp. 1613–1618, 2014.
3. M. Blanco Ramos, A. Fern´andez-Villar, J. E. Rivo et al., "Extraction of airway foreign bodies in adults: experience from 1987-2008," *Interactive CardioVascular and Thoracic Surgery*, vol. 9, no. 3, pp. 402–405, 2009.
4. K. Mise, A. J. Savicevic, N. Pavlov, and S. Jankovic, "Removal of tracheobronchial foreign bodies in adults using flexible bronchoscopy: Experience 1995-2006," *Surgical Endoscopy*, vol. 23, no. 6, pp. 1360–1364, 2009.
5. B. J. Alharthi, I. Masoodi, M. A. Almourgi, and S. Alzahrani, "Occult foreign body in the lung mimicking bronchogenic carcinoma," *BMJ Case Reports*, vol. 2014, Article ID 207438, 2014.
6. R. Zissin, M. Shapiro-Feinberg, J. Rozenman, S. Apter, J. Smorjik, and M. Hertz, "CT findings of the chest in adults with aspirated foreign bodies," *European Radiology*, vol. 11, no. 4, pp. 606–611, 2001.
7. S. Sehgal, S. Dhooria, B. Ram et al., "Foreign body inhalation in the adult

population: experience of 25,998
bronchoscopies and systematic review of
the literature,” *Respiratory Care*, vol. 60,
no. 10, pp. 1438–1448, 2015.