

CASE REPORT

FOREIGN BODY BRONCHUS PRESENTING WITH PLEURAL EFFUSION - A RARE PRESENTATION

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ABSTRACT

INTRODUCTION: Aspirated foreign bodies most commonly are lodged in the right main stem and lower lobe. Aspiration has been documented in all lobes, including the upper lobes, though with less frequency.¹⁻⁴

CASE REPORT: A 28 year old female presented with the chief complaints of shortness of breath since 15 days, cough with expectoration since 15 days, chest pain since 15 days. On examination the trachea was shifted to left side, bilateral chest movements were unequal with reduced chest movement on right side, and tenderness was present on right side of chest. Chest X-Ray showed right sided hydro-pneumothorax. On flexible Bronchoscopy Right bronchus intermedius showed foreign material. Foreign body removal under general anesthesia was done by rigid Bronchoscopy.

DISCUSSION: Unlike foreign-body aspiration in young children and in the elderly, this occurrence is uncommon in adults. The availability of both rigid and flexible Bronchoscopy should be emphasized since larger aspirates may not be retrievable with a flexible bronchoscope. Surgery constitutes the final, definitive option and is generally well tolerated; particularly when the lung parenchyma is spared.⁵⁻⁷ This case emphasizes the fact that healthy adults may tolerate aspiration of foreign bodies for a long time without acute life-threatening consequences.⁵⁻⁸ The exact mechanism is not known. The possible mechanisms are either it may be a result of an inflammatory response to a foreign body in the bronchus or it is secondary to the atelectasis and the sudden more negative intra-thoracic pressure.⁹⁻¹¹

KEYWORDS - Aspirated foreign bodies; Pleural effusion, Bronchoscopy.

INTRODUCTION

Foreign-body aspiration is often a serious medical condition demanding timely recognition and prompt action. Delayed diagnosis and subsequent delayed treatment is associated with serious and sometimes fatal complications. In adults, however, foreign-body aspiration can be tolerated and remain undetected for a long time.²⁻⁴

Aspirated foreign bodies most commonly are lodged in the right main stem and lower lobe. Aspiration has been documented in all lobes, including the upper lobes, though with less frequency.¹⁻⁴

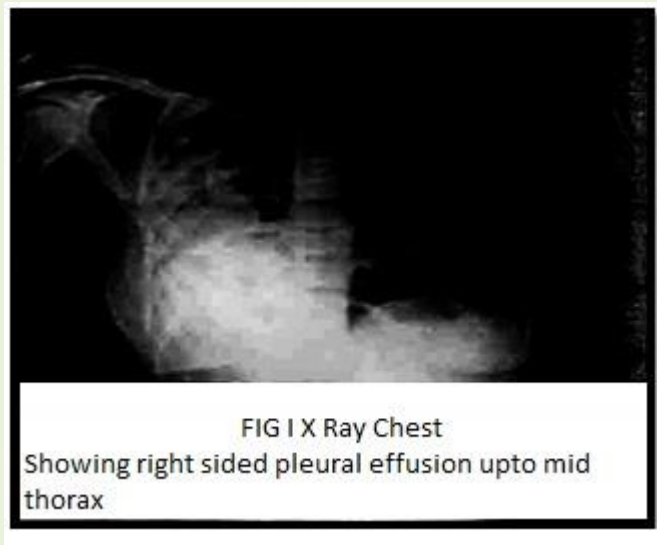
Rigid Bronchoscopy is the procedure of choice for removing foreign bodies in children and in most adults. Success rates for extracting foreign bodies are reportedly more than 98%.

Large solid and semisolid objects are best managed emergently in the operating room with a rigid bronchoscope and appropriate grasping instruments.¹⁻⁴

CASE REPORT

A 28 year old female presented to the department of Respiratory Medicine of Subharti Medical College with the chief complaints of shortness of breath since 15 days, cough with expectoration since 15 days, chest pain since 15 days. There was also history of fever with chills and rigors & loss of weight and appetite. There was no history of any addictions.

FLEXIBLE BRONCHOSCOPY FINDINGS:



Patient was taken for flexible Bronchoscopy under local anesthesia. The flexible bronchoscope introduced intra-nasally.

IMPRESSION

Right bronchus intermedius showed foreign material. Right lower lobe was stenosed.

Biopsy and broncho-alveolar lavage fluid were taken and sent for examination. Biopsy from right bronchus intermedius showed metaplastic change with focal mild dysplastic

On examination the trachea was shifted to left side, bilateral chest movements were unequal with reduced chest movement on right side, and tenderness was present on right side of chest. On percussion of chest dull note was present on right side of chest.

Routine blood investigations were within normal limits.

Chest X-Ray showed right sided hydro pneumo-thorax. The fluid from right pleural cavity was sent for pus culture and sensitivity which came to be pseudomonas species positive.

change. Broncho-alveolar lavage fluid was sent for examination and it came out to be sterile and negative for any malignant cells.

The patient was then planned and taken up for rigid Bronchoscopy and foreign body removal under general anesthesia. On rigid Bronchoscopy the foreign body was visualized in the right bronchus. The secretions over the foreign body were suctioned and the foreign body was removed. The post-operative period was uneventful.



FIG II- Foreign body seen in right bronchus on flexible bronchoscopy

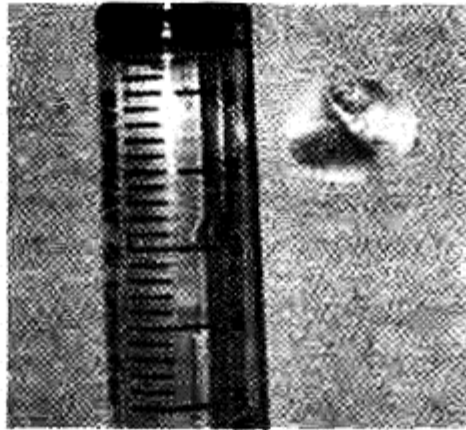


FIG III- Foreign body removed from right bronchus by rigid bronchoscopy.

DISCUSSION

Unlike foreign-body aspiration in young children and in the elderly, this occurrence is uncommon in adults. In the adult population, such aspiration is most commonly secondary to unconscious accidental ingestion during general anesthesia, sedation, intoxication, seizures or neurologic disorders affecting the oro-pharynx. The foreign bodies can be dietary or non dietary but are associated with similar sequelae. The symptoms of foreign-body aspiration range from coughing, wheezing and dyspnea to hemoptysis and choking. In most cases, the diagnosis is confirmed by chest radiography. Computed tomography of the chest maybe valuable in identifying small aspirated objects or when associated chest disease is suspected. Bronchoscopy is frequently both diagnostic and therapeutic. The availability of both rigid and flexible Bronchoscopy should be emphasized since larger aspirates may not be retrievable with a flexible bronchoscope. Surgery constitutes the final, definitive option

and is generally well tolerated, particularly when the lung parenchyma is spared.⁵⁻⁷

What makes this case unusual is the rather delayed and innocuous presentation after aspiration of a foreign object. It emphasizes the fact that healthy adults may tolerate aspiration of foreign bodies for a long time without acute life-threatening consequences.⁵⁻⁸

Foreign body aspiration presenting as isolated pleural effusion is rare. So far only one case has been reported, a 3-y-old child with a vegetable foreign body presented with pleural effusion without pneumonia. 750 ml of transudative pleural fluid was drained and the vegetable matter was removed by bronchoscopy.⁹

The exact mechanism is not known. The possible mechanisms are either it may be a result of an inflammatory response to a foreign body in the bronchus or it is secondary to the atelectasis and the sudden more negative intra-thoracic pressure.⁹⁻¹¹

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