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Delayed Presentation of Aspirated Foreign Body with Peculiar Symptoms

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Abstract:

Aspiration of foreign body is a common problem in children but rarely seen in adults also. They present to the hospital as emergency and on most occasions are removed bronchoscopically. Some late presentation of aspirated foreign bodies are reported in literature. They usually present with recurrent chest pain and chronic cough which can mislead the treating physician. Our patient presented to us 4 years after inhalation of metallic screw that failed bronchoscopic attempt to remove it. He ignored it due to lack of symptoms initially. He presented with worsening symptoms of pain in the chest whenever he coughed and laughed as if something was hitting from inside. Chest X-ray and fluoroscopy revealed the foreign body had migrated to the right postero basal segment requiring a right posterolateral thorocotomy to remove it. The screw was removed with a wedge of lung that contained it. In conclusion, late presentation of inhaled foreign bodies are rarely seen and they mostly require thorocotomy for their retrieval due their remote location.

Key words: *aspiration, foreign body, late presentation, lung*

INTRODUCTION

Foreign body aspiration is a common problem seen in children. Accidental inhalation of foreign body is also seen in adults. Type of aspirated material varies from vegetable matters to metallic parts. Usually, the aspirated material causes symptoms immediately in the form of breathing difficulty, coughing and chest pain. Sometimes, delayed presentations are reported when the foreign body is ignored and does not cause immediate serious symptoms. We report a case of delayed presentation of screw inhalation in a construction worker presented 4 years after inhalation.

CASE REPORT

A 42-year old construction worker presented to us with complaints of pain in the right side of chest and chronic cough. Four years earlier while working on his project he had kept a screw in his mouth, which he aspirated. He presented immediately to a local hospital where they identified the screw to be situated in his right main stem bronchus and attempted a bronchoscopic removal, but the screw could not be retrieved. A repeat attempt at bronchoscopic removal resulted in failure and he was referred to another centre. Since the patient was asymptomatic at that time he decided to ignore the foreign body but over the course of time he started developing chronic cough and intense pain in his right chest whenever he coughed, laughed or sneezed as though something was hitting him from inside. When we investigated him, the X Rays revealed an one inch

screw in his right posterior basal segment (Fig 1) and fluoroscopy showed the screw to be moving with respiration and violently so when he coughed (Fig 2). Since the screw, which was initially in the main stem bronchus had slowly migrated to the periphery of the lung, we decided to retrieve it through a thoracotomy. A right posterolateral thoracotomy (fig 3) was done and the screw was palpated near the lower edge of the posterior basal segment. The screw was removed along with the wedge of the lung that contained it. The patient made an uneventful recovery and the biopsy revealed chronic inflammatory changes in the surrounding lung.

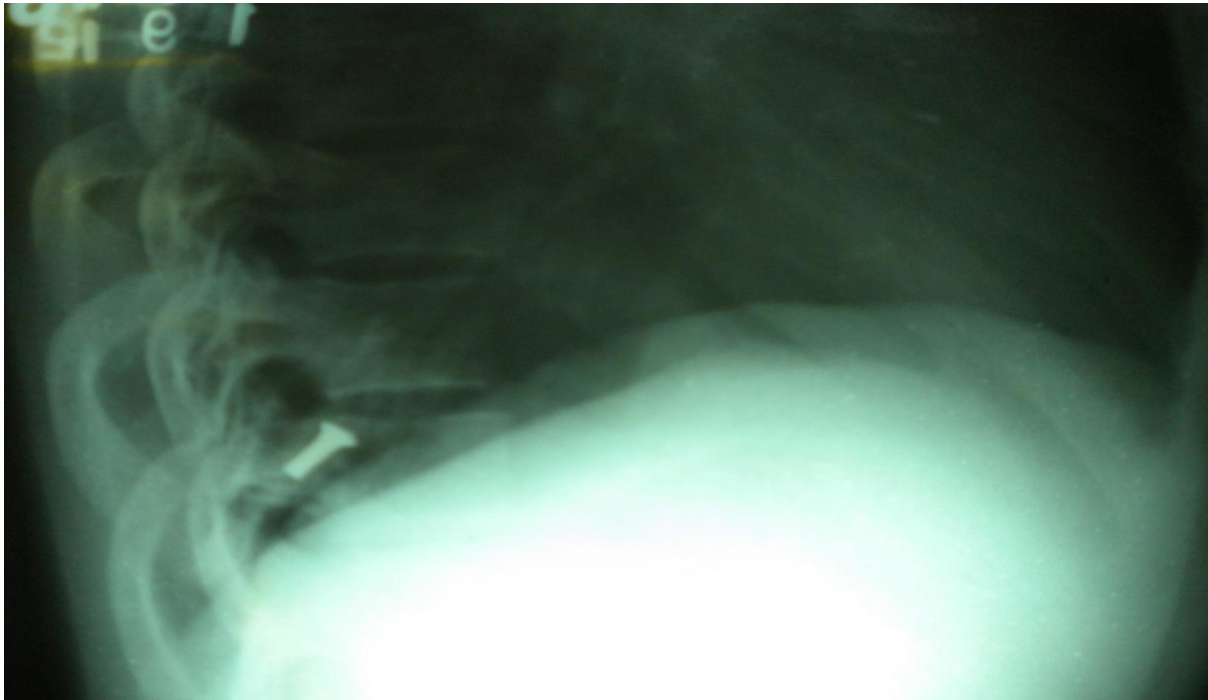


Fig. 1 Lateral plain chest x-ray revealing screw in his right posterior basal segment

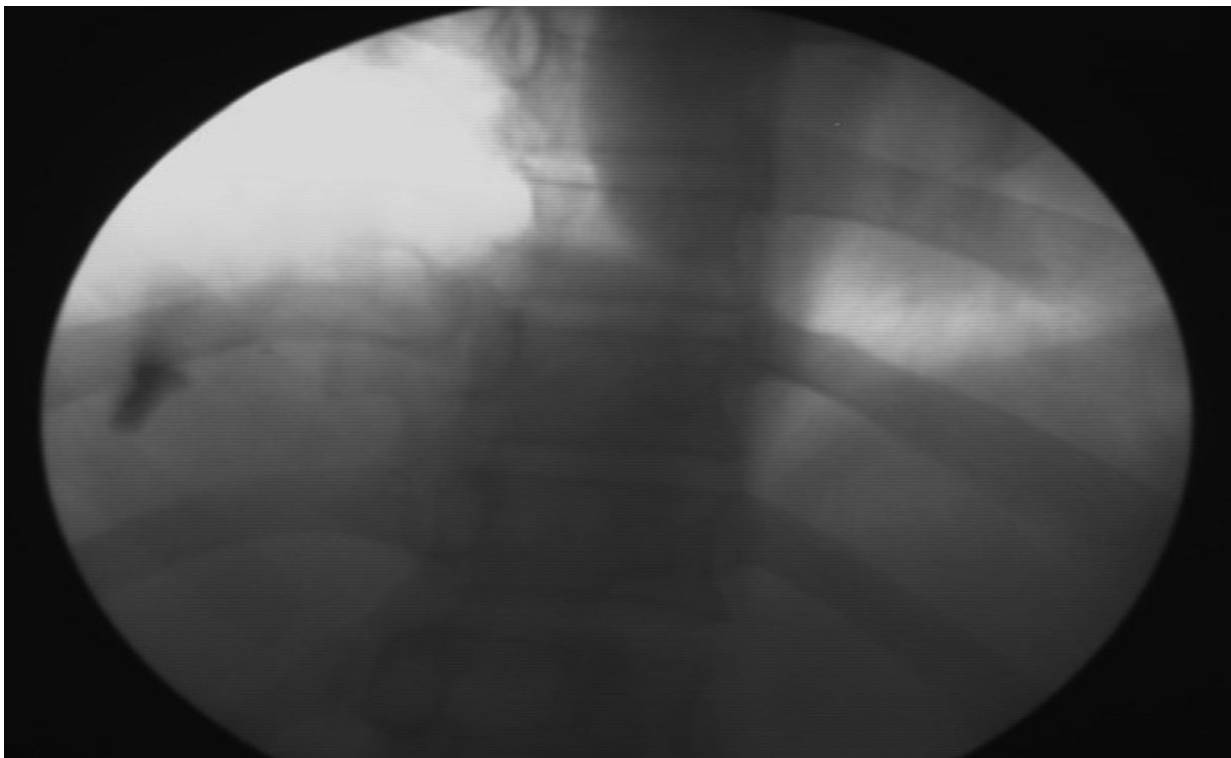


Fig. 2 Fluoroscopy picture of chest showing screw in the right lower lung

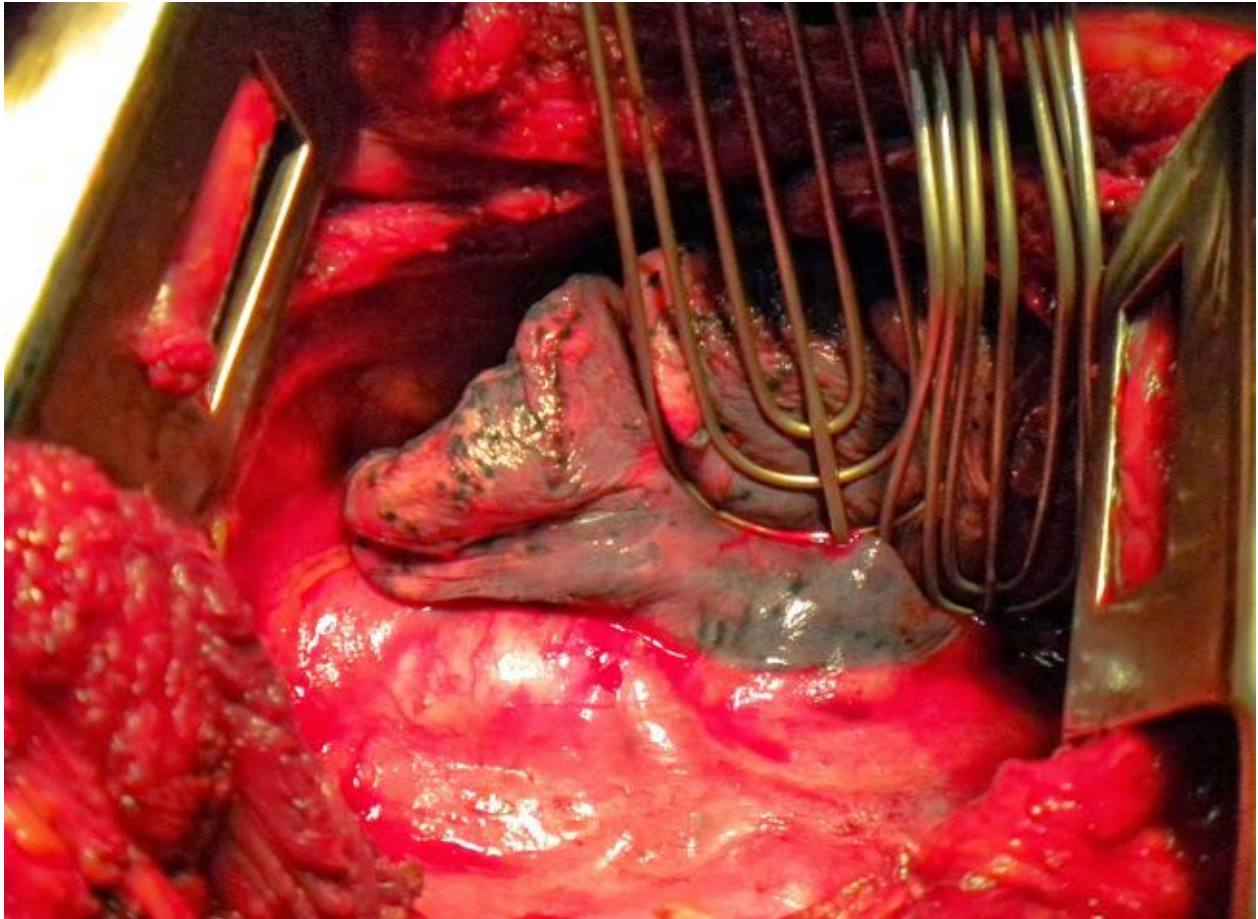


Fig. 3 Right Postero lateral Thoracotomy

DISCUSSION

Delayed presentation of aspirated foreign body is often seen in medical practice. The diagnostic delay is attributed to physician misdiagnosis and partially failure by patients to seek early medical advice. Diagnostic delays are more common in children since they mimic some of the common respiratory problems like asthma, pneumonia and bronchitis. Chronic cough is the commonest symptom in late presentation if the foreign body gets lodged in tracheobronchial region. [1] Recurrent pneumonia, lung abscess and

unexplained fever are other late symptoms. Retained foreign bodies can cause complications like bronchiectasis and bronchoesophageal fistulas. [1]

In the present case, the initial attempt of removal was unsuccessful and the patient ignored it due the lack of symptoms initially. He presented to us very late when he had worsening symptoms. He had chronic cough and stabbing chest pain while laughing, coughing and deep breathing, a peculiar

symptom probably due the screw hitting the chest wall, which prompted him to seek our help.

Nonorganic foreign bodies and tiny metallic foreign bodies are difficult to diagnose by chest X ray alone. Fluoroscopy with image intensifier or CT scan is suggested for the localization in these situations. [2] Fluoroscopy was used in our patient for exact localisation of the aspirated screw.

Non organic foreign bodies like coins, pins, nails, screws, wires, pencil caps, ball-point tip, broken tooth are also reported in literature. [2] Aspiration of screw of tracheostomy cannula, which was taken out by fiberoptic bronchoscopy was reported by Celik P et al. [3] Arsalane et al [4] described two cases of scarf pin aspiration requiring thoracotomy removal in view of distal lodgement. Harischandra DV et al [5] reported a case of aspirated metal pin extracted by thoracotomy due to failure of multiple attempts with both rigid and flexible bronchoscopy because of distal lodgement in the anteromedial basal segment of the left lung. Dave et al [6] reported a patient with aspirated metallic foreign body removed using fluoroscopy and thoracoscopy. Causey et al [7] presented a case of safety pin aspiration requiring open thoracotomy for removal. Report of 17 cases requiring pulmonary resection after delayed presentation was reported by Duan L et al. [8]

The usual sites of lodgement are the major airways on the right side where most of them can be retrieved with a bronchoscope. However there are instances where either due to the location of the foreign body or due to the state of the

surrounding lung a thoracotomy is required. Removal by bronchoscope is not usually possible in delayed presentation. This is due to very distal lodgement of FB over course of time and non approachability by bronchoscope. Non organic FB erode the bronchiole and gets lodged in the lung parenchyma by forming foreign body inflammation. Thoracotomy and removal by lobectomy or segmentectomy is the only option in delayed presentation as seen in our case. Sometimes, Lobectomy is necessary if screw gets impacted with destroyed lobe. [2] In the present case, the screw was no longer seen in the bronchiole but eroded into the lung parenchyma and seen in the distal segment of right lower lobe with surrounding diseased lung. So, Thoracotomy and removal of screw with surrounding diseased lung was done.

In conclusion, Delayed presentation of aspirated foreign body is seldom amenable to bronchoscopic removal. Surgical removal in the form of thoracotomy or thoracoscopy is advised to remove the foreign body with the diseased lung.

Conflicts of Interest: Nil

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