

# CASE REPORT

## A Missed Coin Lesion!

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### Introduction

Aspiration of foreign objects is not uncommon in children or adults.<sup>1</sup> Children usually aspirate foreign objects accidentally, whereas adults usually suffer from a neurological impairment, the influence of alcohol, or an underlying psychological disorder.<sup>2</sup> Presentation ranges from benign to more serious, which requires emergent intervention for removal.<sup>3</sup>

### Case Report

A 62-year-old male with paranoid schizophrenia, depression, and neuroleptic-induced extrapyramidal symptoms presented to the emergency department with complaints of coughing blood. He had intermittent dark bloody expectorations, with no associated fever, chills, or increase in sputum production. He denied any previous exposure to tuberculosis. A tuberculin skin test was negative. History was relevant for asbestos exposure. He denied any foreign body ingestion.

A postero-anterior chest radiograph (Figure 1) initially was interpreted by the emergency physician as showing no acute lesion. The patient was discharged on doxycycline for possible acute bronchitis.

A radiologist reviewed the chest x-ray and reported a round metallic opacity near the right hilum. A computed tomographic imaging of the chest (Figure 2) also revealed a metallic foreign body, probably a coin, which laid in the bronchus intermedius on the right, distal to the origin of the bronchus

to the right upper lobe. Bronchoscopy was performed and a penny was removed.



Figure 1. Postero-anterior chest x-ray: A round metallic radiopacity projected over the right paramediastinal stripe at the level of the right hilum.



Figure 2. Computed tomography of the chest without contrast: A metallic foreign body lies in the right bronchus intermedius.

## Discussion

Intentional ingestion of foreign objects in adults is more common amongst those with mental impairment, psychiatric disorders, or for secondary gain.<sup>4</sup> Presentation usually is deferred and most present with multiple objects aspirated placing them at an increased risk for complications.<sup>4</sup>

A high index of suspicion is important in this population.<sup>1</sup> Diagnosis was only made in 55% of patients prior to bronchoscopy.<sup>5</sup> Chest radiography was only diagnostic in 14% of cases if the object was opaque. Computed tomography scan is usually more sensitive in diagnosing radiolucent objects.<sup>6</sup> Bronchoscopy, either rigid or flexible, is considered both diagnostic and therapeutic.<sup>1,5</sup> Surgery is the final option with good results if there is no parenchymal involvement.<sup>7</sup>

Presentation can be benign or life threatening.<sup>1</sup> Adults, unlike children, do not present with asphyxia but with symptoms of coughing, wheezing, and dyspnea to choking and hemoptysis which can mimic pneumonia or tumor.<sup>5,7</sup> However, obvious

hemoptysis is present in less than 15%.<sup>5</sup>

The most common aspirated object is a bone described in 45% of cases.<sup>5</sup> Other aspirated objects include thorns, matches, and organic materials such as nuts, seeds and vegetables.<sup>1,5</sup> Ingested coins also have been described in literature.<sup>2</sup>

A foreign body should be removed once diagnosed irrespective of time of aspiration. The longer the foreign body stays, the worse the morbidity associated with it.<sup>2</sup> The majority of aspirated objects usually are dislodged in the carina and right main stem bronchus.<sup>1,5</sup> If the object was present for a long period, it can migrate and cause endobronchial erosion.<sup>5</sup> With time and chronic inflammation, an aspirated object can mimic an endobronchial mass requiring investigation to rule out bronchogenic carcinoma.<sup>6</sup>

A high index of suspicion for foreign body aspirations is needed in psychiatric patients with respiratory symptoms, even those on optimal psychiatric treatment.<sup>2</sup> If the patient presents late, the only clue for the diagnosis would be past history.

## References

- <sup>1</sup> Zubairi AB, Haque AS, Husain SJ, Khan JA. Foreign body aspiration in adults. *Singapore Med J* 2006; 47(5):415-418. PMID: 16645693.
- <sup>2</sup> Lewis C, Hsu HK, Hoover E. Aspiration of foreign bodies in adults with personality disorders: Impact on diagnosis and recurrence. *J Natl Med Assoc*; 103(7):620-622. PMID: 21999039.
- <sup>3</sup> Ripley DP, Henderson AK. A case of bronchial aspiration: The importance of early diagnosis and clinical suspicion. *Prim Care Respir J* 2007; 16(3):191-193. PMID: 17530147.
- <sup>4</sup> Martindale JL, Bunker CJ, Noble VE. Ingested foreign bodies in a patient with pica. *Gastroenterol Hepatol (NY)*; 6(9): 582-584. PMID: 21088747.
- <sup>5</sup> Debeljak A, Sorli J, Music E, Kecelj P. Bronchoscopic removal of foreign bodies in adults: Experience with 62 patients from 1974-1998. *Eur Respir J* 1999; 14(4): 792-795. PMID: 10573222.
- <sup>6</sup> Franquet T, Giménez A, Rosón N, Torrubia S, Sabaté JM, Pérez C. Aspiration diseases: Findings, pitfalls, and differential diagnosis. *Radiographics* 2000; 20(3):673-685. PMID: 10835120.
- <sup>7</sup> Bidwell JL, Pachner RW. Hemoptysis: Diagnosis and management. *Am Fam Physician* 2005; 72(7):1253-1260. PMID: 16225028.

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