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CASE REPORT

A YOUNG WOMAN WITH AN UNUSUAL FOREIGN BODY ASPIRATION

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ABSTRACT

Foreign body aspiration is a worldwide health problem and often associated with life threatening complications. A high index of suspicion and careful history taking are important as symptoms can be non-specific and easily overlooked. There are no specific tests for diagnosis although chest imaging can be useful. Flexible bronchoscopy is often needed for diagnosis and treatment; however, rigid bronchoscopy may be necessary in certain situations. We report the case of young woman who accidentally aspirated an unusual sharp foreign body, requiring both flexible bronchoscopy and gastroscopy for ultimate removal.

Key words: Bronchoscopy,foreign body aspiration,hijab pins

INTRODUCTION

Foreign body aspirations are important causes of morbidity and mortality in extremes of age (1, 2). Aspiration mostly occurs in children but is not uncommon in adults (2). The common materials aspirated are organic or inorganic materials. Some risk factors are loss of consciousness, intoxication, sedatives or an involuntary aspiration when frightened. Young Muslim women also frequently have hijab pin aspirations (3-5).Foreign body aspiration may present as a life threatening event that necessitates prompt removal of the aspirated material. Foreign body aspiration diagnosis is usually difficult because of non specific symptoms, lack of specific diagnostic methods and also due to being overlooked by the physician (6-8). As most of the foreign bodies are radiolucent, imaging is not always helpful. The foreign body may cause serious complications due to infections, ulcerations, obstructive pneumonitis, and airway obstruction. Early suspicion and diagnosis is important as delayed recognition or removal may result in serious complications (9-11). Rigid bronchoscopy is easy and safe to remove the foreign bodies from the bronchus. The flexible fiber optic bronchoscope can be used also. Withdrawal of an exposed foreign body poses the risks of trauma and impaction in the trachea, larynx, or pharynx.

CASE REPORT

A 20-year old female college student from Southern Ethiopia accidentally aspirated an unusual sharp foreign body (Hijab pin) when she held the needle between her teeth while dressing. She subsequently developed a cough and mild, intermittent hemoptysis. One week later, she traveled over 300 kilometers for consultation at Tikur Anbessa Specialized Hospital, the only center with specialized pulmonary services in Ethiopia.

The patient's physical exam was unremarkable but her chest radiograph showed a linear metallic density located in the left main stem bronchus. The patient was subsequently scheduled for bronchoscopy for foreign body extraction. Consent was obtained and flexible bronchoscopy with an Olympus video bronchoscope was performed using a standard procedure with conscious sedation (diazepam and fentanyl) and local anesthesia (lidocaine). Blood pressure, pulse rate and oxygen saturation were monitored. In the left main bronchus, a foreign body was detected, covered with mucus and attached to the wall of the

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airway (Figure 2, Panel A). The needle was initially difficult to remove but eventually was detached with fine movement using a standard biopsy forceps. It was then grasped and brought up to the pharyngeal area. While in the oropharyngeal area, the foreign body was inadvertently dropped and swallowed. It was immediately removed from the stomach using a snare forceps via gastroscopy performed by an on-site gastroenterologist (Figure 2, Panel B). The patient had no complications after the procedure and her symptoms completely resolved.

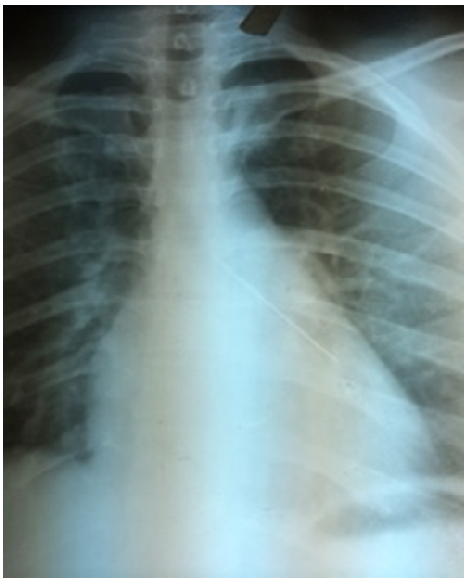

Figure1. CXR images of metallic foreign body in the lung (Panel A); Lateral CXR image (Panel B)

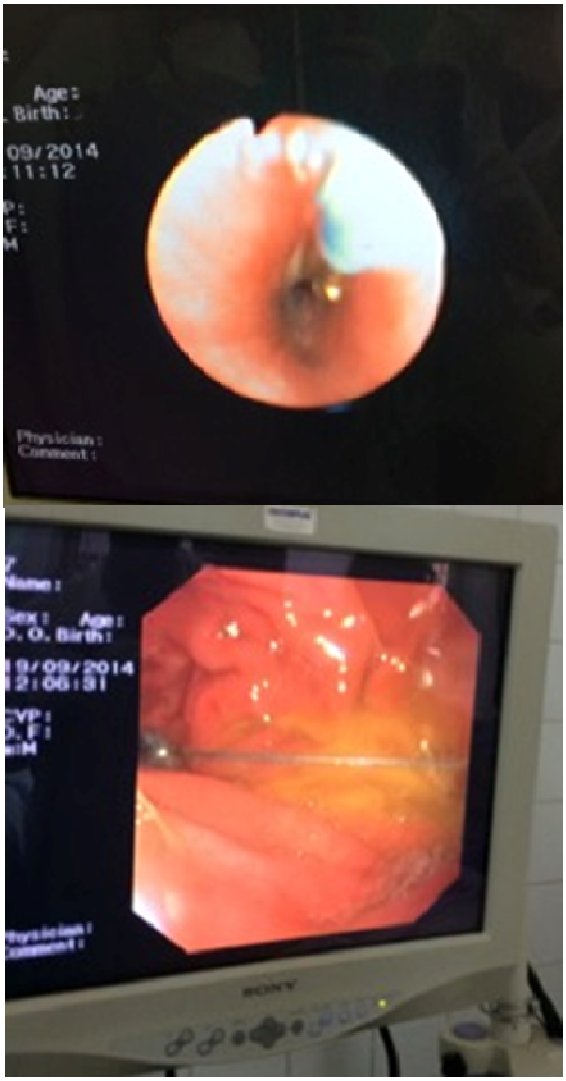

Figure 2: Foreign body in the left main bronchus (Panel A) and in the stomach (Panel B)

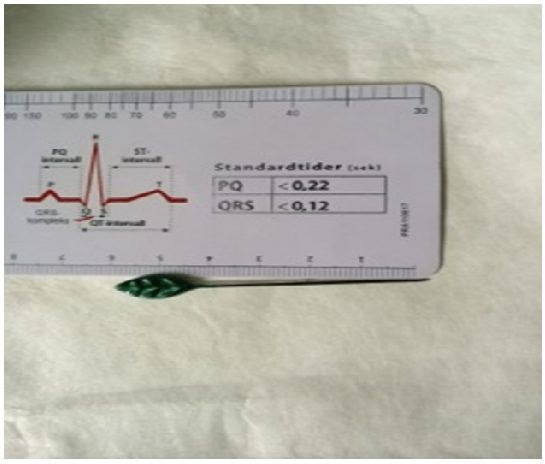

Figure 3. Hijab pin after removal

DISCUSSION

Foreign body aspirations are an important cause of morbidity and mortality worldwide, occurring most often in children under the age of 15 years and in the elderly (1, 2).Commonly aspirated foreign bodies can be nuts, nails, pins, and dentures. Our patient was fortunate as the location of the foreign body was discernible on the chest radiograph given its metallic composition. Delayed removal may cause complications (9-11).

Our patient experienced an unusual aspiration with a sharp Hijab pin, which is commonly used by young Muslim women to cover their head and hold their hair in place (4). To our knowledge, this is the second report of aspiration of a hijab pin and the first to use flexible bronchoscopy to remove the foreign body in Ethiopia (3).Removal of sharp embedded pins with flexible bronchoscopy can present additional challenges such as traumatic injury to the airway wall, vocal cords, and oropharynx. In our case, it was initially difficult to move and detach the foreign body and then removal was complicated due to loss of contact with the object within the oropharynx. Fortunately gastroenterology backup was present to assist in retrieval.

In Ethiopia, there is limited experience in using flexible bronchoscopy for foreign body removal. Our experience with this case has taught us that special precautions must be taken when attempting to remove sharp foreign bodies. A team approach with thoracic surgery and gastroenterology, as well as availability of appropriate equipments are advised.

*Footnote:** Flexible bronchoscopy has been reintroduced to Tikur Anbessa Hospital, Ethiopia recently within the "East African Training Initiative", a teaching program for pulmonary fellows, supported by the World Lung Foundation.
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