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### Case Report

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## Accidental inhalation of a headscarf pin: A case report

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#### Abstract

The inhalation of a headscarf pin is an increasingly frequent phenomenon in countries where women wear the hijab, and its consequences can be serious. The aim of this report is to present a rare case of this emerging clinical entity, to illustrate its severity, and to discuss diagnostic and therapeutic approaches. We report the case of an 18-year-old woman with no significant medical history who developed a penetration syndrome following the accidental inhalation of a headscarf pin. Upon admission, the patient was hemodynamically and respiratorily stable, and her clinical examination was essentially normal. Chest X-ray revealed a linear radiopaque opacity with left hilar projection. Flexible bronchoscopy allowed visualization of the pin lodged at the entrance of the left lower lobe and enabled its removal with forceps without complications. The patient was placed on a short course of oral antibiotics and corticosteroids and received counseling to avoid future inhalation accidents.

*Keywords:* Headscarf pin; Foreign body; Accidental inhalation; Flexible bronchoscopy.

#### Introduction

Foreign body inhalation is a rare event that may be accidental or result from lesions at the aerodigestive crossroads. It can go unnoticed or present with noisy symptoms [1,2]. Foreign bodies vary in nature, and in this article, we focus on metallic headscarf pins, widely used by adolescent and young adult women in muslim countries to secure their hijabs. We report the case of a young woman who accidentally inhaled such a pin, which was successfully removed via flexible bronchoscopy despite the challenges involved.

#### **Patient and observation**

Ms. I.C, 18 years old, with no significant past medical history or underlying vulnerability, presented 24 hours prior to admission with a penetration syndrome, including an episode of persistent coughing, acute respiratory discomfort and a choking crisis. This occurred after she accidentally inhaled a headscarf pin that she had been holding in her mouth while adjusting her veil. Nearly 24 hours after the incident and despite efforts to expel the foreign body by coughing and induced vomiting, the patient presented to the emergency department.

On admission, she was hemodynamically and respiratorily stable with normal oxygen saturation in ambient air and with no cyanosis. Pulmonary examination was unremarkable. Chest X-rays (frontal and lateral) revealed a linear radiopaque opacity with left hilar projection, with no associated parenchymal or pleural abnormalities (Figure 1). Initial flexible bronchoscopy revealed the pin embedded at the entrance of the left lower lobe, surrounded by inflamed and hyperemic mucosa (Figure 2). The pin was removed uneventfully using forceps (Figures 3 and 4). The patient was treated with antibiotics (amoxicillinclavulanic acid 3 g/day) and a short course of oral corticosteroids (prednisolone 40 mg/day). She also received counseling to prevent future penetration incidents. Clinical progress was good. Follow-up chest X-ray was normal with no complications (Figure 5). **Citation:** Hallouli S, Bougteb N, Belhaj C, Bamha H, Msika S et.al. Accidental inhalation of a headscarf pin: A case report. J Clin Images Med Case Rep. 2025; 6(6): 3623.



Figure 1: Chest X-rays (frontal and lateral views) revealed a linear radiopaque opacity with left hilar projection.



**Figure 2:** Flexible bronchoscopy identified the headscarf pin lodged at the entry of the left lower lobe bronchus, with surrounding inflamed and hyperemic bronchial mucosa.



Figure 4: The headscarf pin following its extraction.

#### Discussion

Foreign body inhalation can be serious and life-threatening. While it is common in children, especially between the ages of 1 and 3 and more frequently in males [1,2], it is much rarer in adults and typically occurs in predisposed individuals (neurological disorders with swallowing or coughing reflex impairments, sedative or alcohol abuse) or during risky situations (dental procedures, coughing fits, laughter, sobbing) [1,3]. The most commonly encountered foreign bodies are organic materials such as peanuts or fish bones, or dental items such as teeth, crowns, and bridges. However, the nature of foreign bodies may be influenced by sociocultural factors, especially in muslim countries where straight metallic pins are widely used to secure heads-



Figure 3: The headscarf pin was extracted using forceps.



Figure 5: Post-extraction frontal chest X-ray showing no detectable abnormalities.

carves among adolescent and young women. These individuals often hold the pins in their mouths while adjusting their hijabs. The posture during this maneuver—head tilted back while talking, laughing, coughing, or taking a deep breath—favors accidental inhalation of the pin, which often ends up in the tracheobronchial tree in this patient group [4-8].

The emergence of this headscarf pin inhalation syndrome in the last two decades is not entirely understood, especially given that the hijab has been worn for centuries across the Islamic world. Cultural investigations revealed a shift in hijab styling and pinning techniques among young Muslim women. Older women use traditional methods such as safety pins or snap buttons, while the new fashion trend involves using sharp, coloredheaded straight pins to tightly secure the scarf [9].

Routine imaging should include a cervicothoracic and abdominal X-ray to rule out ingestion of the foreign body [6]. The metallic and radiopaque nature of these pins usually makes them easy to detect radiologically. Headscarf pins are found in various locations. While the right bronchial tree would seem a more likely site due to its more vertical orientation [5,8], several studies have shown a predominance of left-sided locations (52.9%), as in our case. This has been attributed to the Bernoulli effect: the negative pressure generated by coughing or laughing is greater in the narrower left bronchial tree compared to the right, creating a suction force that directs the pin to the left side [5,10-12].

Suspected or confirmed intrabronchial foreign body requires emergency bronchoscopy for both diagnosis and treatment. In the case of headscarf pin inhalation, early extraction is essential due to the pointed end, which can become embedded in the bronchial mucosa during intense coughing or deep breathing. The pins may also migrate distally, evading visualization by bronchoscopy [5,13]. Extracting a sharp foreign is a delicate procedure requiring special attention. The success of removal depends on the practitioner's experience [13,14]. There is currently no consensus on the tools and techniques for extracting tracheobronchial foreign bodies—it depends on team expertise [7]. Rigid bronchoscopy under general anesthesia and surgery remain options in case of failure, especially when the pointed end is deeply embedded in the mucosa. Reported thoracotomy rates range from 1.6% to 18% [4,6,7]. Prevention remains the best treatment.

#### Conclusion

Through this case report, we emphasize the importance of raising awareness among young hijab-wearing women about the safe handling of headscarf pins. These pins are sharp foreign objects that can penetrate airway structures, and their extraction can be particularly challenging and requires careful attention.

**Declaration of interests:** The authors declare no conflicts of interest related to this article.

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