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Nine Months with a Pin: Thoracotomy After Repeated Bronchoscopic Failures in a 16-Year-Old with Hijab Syndrome

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Key Words
Hijab syndrome, foreign body inhalation, adolescent thoracotomy, bronchoscopy failure

1 Background

- Foreign body aspiration (FBA): Major cause of death in children under five.
- Caused by partial or complete airway obstruction by a solid object.
- Presents with coughing, wheezing, or stridor.
- May lead to hypoxia or pneumothorax if untreated.
- “Hijab Syndrome”: Inhalation of scarf pins by young Muslim females.

2 Case Presentation

- Patient: 16-year-old healthy, veiled female.
- Incident: Accidentally inhaled a hijab pin during a fall while adjusting her headscarf.
- Symptoms: Persistent dry cough and dyspnea developed soon after.
- Imaging: Showed a metallic foreign body in the right middle lobe.
- Initial management: Multiple failed bronchoscopic attempts at two institutions.
- Delay: No further intervention for nine months due to financial constraints.
- Re-presentation: Exertional dyspnea and intermittent right-sided chest pain.
- Procedure: Right posterolateral thoracotomy through the 5th intercostal space.
- Findings: Pin embedded in lung parenchyma, removed with minimal trauma.
- Outcome: Uneventful recovery; chest tubes removed on day 5, discharged stable.

3 Figures:

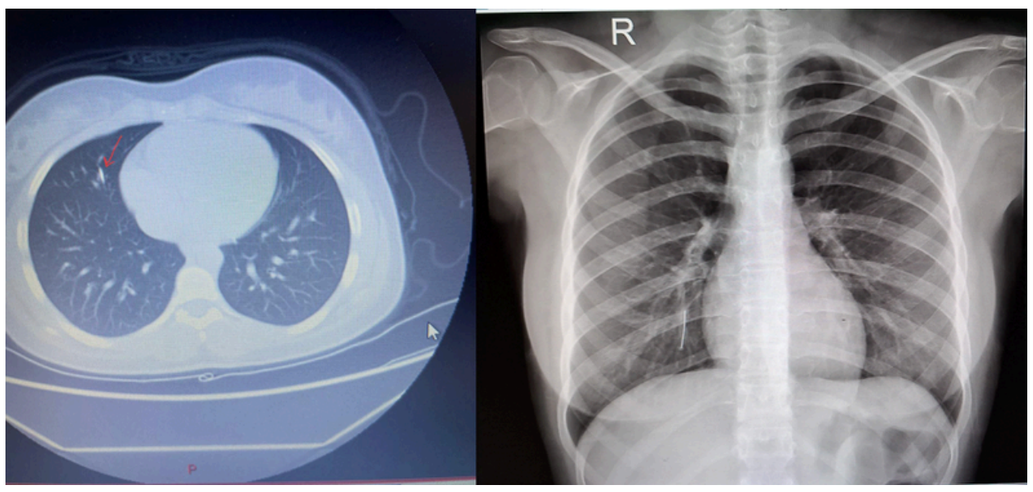

Figure 1: Pre-operative imaging showing a metallic linear foreign body (2.6 cm) in the distal anterolateral segment of the right middle lobe bronchus.

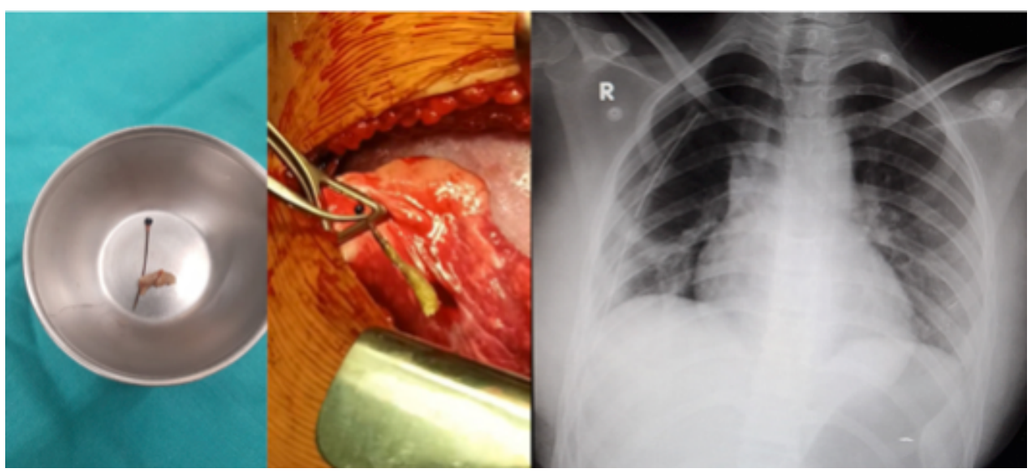

Figure 2: Intraoperative and postoperative findings. The retrieved hijab pin, successfully removed via thoracotomy, is shown.

4 Discussion

- Tracheobronchial foreign body aspiration (FBA): Common cause of morbidity and mortality in children; severe cases may lead to asphyxia.
- High-risk group: Muslim females who accidentally inhale hijab pins a pattern known as “Hijab Syndrome.”
- Mechanism: Holding pins in the mouth while adjusting the headscarf; aspiration triggered by talking, coughing, or sudden inhalation.
- Symptoms: Cough and dyspnea are most common.
- Diagnosis: Based on history and chest X-ray (radiopaque pin); CT scan confirms location and orientation.
- Localization: Hijab pins usually lodge in the left bronchus (53% of cases) due to Bernoulli’s phenomenon; in this case, the right bronchus was affected.
- Management:
  - Rigid bronchoscopy (preferred in children) – allows airway control and suction.
  - Flexible bronchoscopy (preferred in adults) – useful for distal foreign bodies.
- Surgical intervention: Thoracotomy indicated when bronchoscopic retrieval fails (reported in 6–7% of cases).
- Case highlight: Pin remained for nine months despite four failed bronchoscopies, requiring thoracotomy—emphasizing early diagnosis and timely surgical escalation.

5 Conclusion

This case illustrates the challenges of scarf pin aspiration in young hijabi females. While bronchoscopy is first-line, repeated failure should prompt timely surgery. Clear surgical thresholds and preventive education are crucial.

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