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Coin Stacking in the Esophagus: A Rare Case of Pediatric Triple Foreign Body Ingestion

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Abstract: ***Foreign body ingestion is a frequent emergency in pediatric patients. Appropriate radiographic imaging becomes crucial for identification, especially with unreliable history seen in unsupervised children. While cojns are some of the most common foreign bodies involved, only two cases of stacked triple coin ingestion have been reported in pediatric literature. We would like to present a rare case of stacked triple coin ingestion in a 9-year-old child, who presented to the emergency department after an unwitnessed ingestion. X-rays in anteroposterior and lateral views revealed a stacked arrangement of three radiopaque shadows at the level of the cricopharynx, indicative of three coins lodged in the esophagus. Rigid esophagoscopy under general anesthesia was performed, successfully removing all three coins with no postoperative complications. This case highlights the rarity of stacked coins as an entity, and further substantiates the role of radiography in identification and differentiation of such a case.***

Keywords: Rigid esophagoscopy, Multiple Coins, Foreign bodies, Stacked coins.

1. Introduction

Foreign body ingestion is a common emergency, especially in the pediatric population. Coins are some of the most common foreign bodies to be impacted in the aerodigestive tract (1). As these cases are mostly seen in unsupervised pediatric population, it is difficult to obtain a reliable history. A reliable history and appropriate radiographic imaging are vital for quick identification and localisation of the foreign body. Multiple coin impaction is a rarely seen entity. In this case report, we are presenting a very rare scenario of three coins impacted in a stacked manner in the esophagus.

2. Case Presentation

A 9-year-old girl presented to the emergency with a history of unwitnessed foreign body ingestion around 7 hours ago. The patient was vitally stable on arrival. On further questioning, the child admitted to having ingested three coins. Chest X-rays were obtained in both anteroposterior and lateral views. The anteroposterior view revealed a round radiopaque shadow at the level of cricopharynx with no other foreign body in esophagus or stomach (Figure 1a). The lateral view showed a radiopaque shadow with a bevelled edge indicating presence of three stacked foreign bodies with the trachea lying anterior to the radiopaque shadow (Figure 1b).

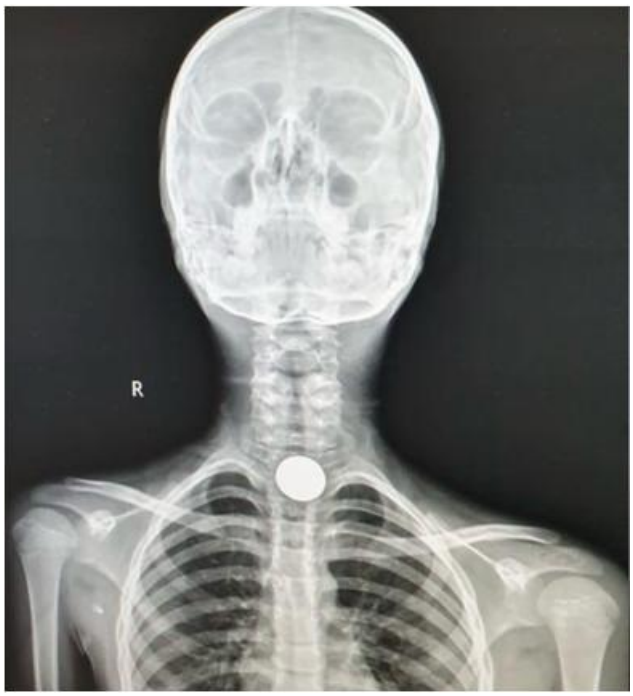

Figure 1 (a): A chest X-ray with anteroposterior view showing radiopaque shadow at the level of cricopharynx.

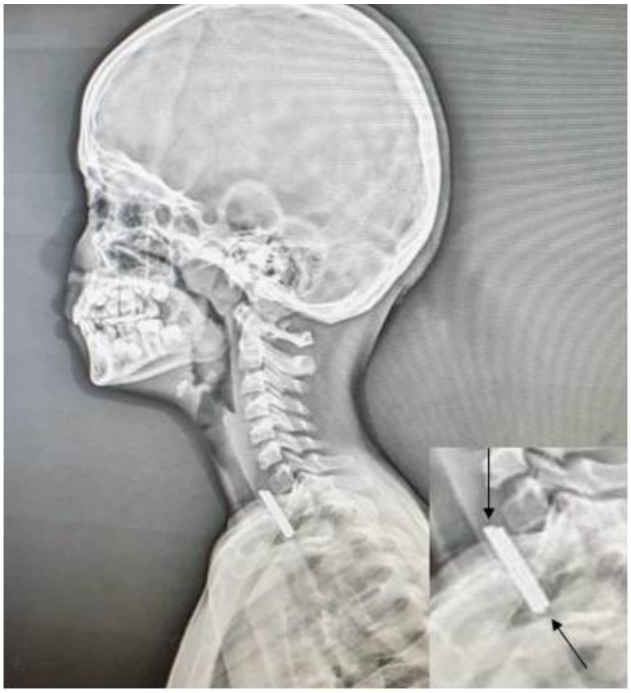

Figure 1 (b): The lateral view shows the shadow with a bevelled edge (black solid arrows in the magnified view) raising suspicion of multiple stacked foreign bodies.

The patient was immediately taken up for foreign body removal by rigid esophagoscopy under general anesthesia. Three coins were found just below the level of cricopharynx which were removed safely with no injury to nearby mucosa (Figure 2).

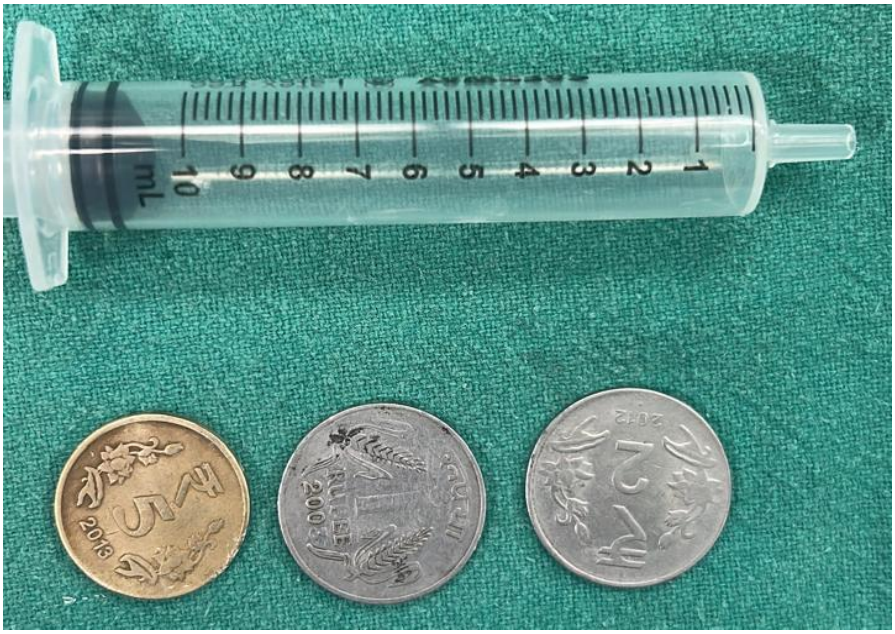

Figure 2: Three coins were removed successfully via Rigid esophagoscopy.

Check esophagoscopy was done to assess for any signs of injuries, revealing no such injury. Postoperative radiogram showed no abnormality and the child was discharged after observation for 24 hours.

3. Discussion

Coin ingestion is a common pediatric emergency. Multiple coin ingestion is a rare entity, even more unique is a triple coin ingestion appearing in a stacked manner. Till date, only two cases have been reported of a triple coin ingestion (2,3). Coins are most commonly impacted in the upper esophagus at the level of cricopharynx due to it being a naturally constricted area. On impaction, it can be associated with mucosal injury which can further lead to bleeding and rarely, perforation and stenosis of the involved segment (4,5). Thus, impacted foreign bodies, especially in the upper esophagus, should be limited on an emergency basis to prevent any such complications.

As most of pediatric foreign body ingestions are unwitnessed, clinicians generally rely upon radiographic appearance to know about the shape, size, location, number of foreign

bodies as well as any complications that may have occurred. In case of coin impaction in esophagus, an anteroposterior view will show a circular shadow. Multiple stacked coins can give the same 'halo' or 'double-ring' appearance as a button battery does. Thus, a lateral view is required to differentiate as multiple stacked coins will show a difference in the anterior and posterior heights (6). While a single coin may be able to pass easily through the cricopharynx due to it being a relatively smooth, rounded foreign object, stacking of coins is likely to result in impaction at the cricopharynx and is more prone to complications as mentioned above. Removal of stacked foreign bodies is also challenging due to the opening size of the jaw of forceps available. While manoeuvring the forceps, one or more of the foreign bodies may be accidentally pushed further into the alimentary tract. These factors lead to a more difficult diagnosis and management of the rare cases of stacked foreign bodies. Additionally, postoperative radiograms should be done to rule out any other foreign bodies that may have been missed.

4. Conclusion

Children are prone to ingesting foreign bodies which may become lodged in the esophagus or airway. An Xray of the chest, especially a lateral view, is quite helpful in localisation and identification of foreign body, especially when multiple foreign bodies are suspected. The above presented case shows a unique and rare case of multiple coins stacked together in the esophagus which necessitated an emergency rigid esophagoscopy.

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