CASE REPORT

Nasopharyngeal foreign body triggered by a blind finger sweep

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SUMMARY

A previously healthy 1-year-old boy suddenly began choking and coughing after ingesting a coin. The child's mother attempted to extract the coin by inserting her fingers in his mouth and sweeping the oral cavity. The mother felt the object momentarily with her fingertips but was unable to retrieve it, and brought her son to a local hospital for assistance. The patient was referred to our emergency department (ED) for possible oesophageal obstruction by a foreign body based on the X-ray findings. On arrival at our ED, the child exhibited mild gagging but presented no respiratory symptoms and normal pulmonary examination. The chest X-ray revealed a nasopharyngeal foreign body. The patient was placed under procedural sedation and emergency removal was successfully completed by an otolaryngologist. Subsequently, the patient was discharged without complications.

BACKGROUND

Foreign body ingestion is commonly encountered in the paediatric population. Most ingested foreign bodies tend to pass through the digestive tract without incident. The most frequent site of impaction is the oesophagus, although in some cases the object is inhaled into the trachea.¹ This case is a noteworthy instance of the unintended movement of the foreign body from the oral cavity into the nasopharynx resulting from a blind finger sweep.

CASE PRESENTATION

A previously healthy 1-year-old boy suddenly began choking and coughing after swallowing a coin he had been playing with. His mother attempted to retrieve the coin by sweeping her child's oral cavity with her fingers. Although she felt the object with her fingertips, it disappeared in a few seconds. The mother took him to a local hospital for assistance. The patient was referred to our emergency department (ED) for a possible oesophageal obstruction by a foreign body based on the X-ray findings.

INVESTIGATIONS

The child did not show any respiratory symptoms such as respiratory distress or coughing, and exhibited only gagging. On physical examination, the patient was alert with a respiratory rate of 24 breaths/min and a heart rate of 120 bpm. His oxygen saturation was 100% on room air and his body temperature was 36.4°C. Although his pulmonary examination was normal without work of breathing including retractions and nasal flaring,

the chest X-ray demonstrated a circular object lodged in the nasopharynx (figure 1A, B).

OUTCOME AND FOLLOW-UP

An otolaryngologist was consulted and emergency removal of the object was performed while the patient was under procedural sedation. The laryngofibroscope showed a coin, 23.5 mm in diameter, positioned in the posterior nasopharynx. The object was successfully removed using Magill forceps under direct vision after it was pushed out to the oropharynx using a fibroscope. After removal, the gagging had stopped and the patient was discharged without any complications. Prior to leaving the hospital, the parents were given guidance on injury prevention and advised not to use the blind finger sweep to retrieve ingested foreign objects in the future.

DISCUSSION

Although several cases of a nasopharyngeal foreign body have been reported, the exact incidence is unclear.²⁻⁴ The symptoms are thought to be purulent nasal discharge, nasal obstruction, chronic rhinosinusitis and persistent coughing, but some cases are asymptomatic.⁵ Generally, foreign bodies can intrude into the nasopharynx through the oropharynx or most commonly, the nose. In spite of this, the actual number of cases is small because the vestibulum nasi is narrower than the nasopharynx.² Moreover, most ingested foreign bodies tend to enter the oesophagus while some are inhaled into the trachea.¹ The movement of foreign objects from the oral cavity to the nasopharynx via the isthmus of the oropharynx is also rare. Most cases of nasopharyngeal foreign bodies intruding from the oral cavity were reportedly caused by manipulation,³ regurgitation brought about by vomiting and coughing,⁶ and ingestion while in a supine or cervically extended position.⁴ In the present case, the object was thought to have become lodged in the nasopharynx by the mother's blind finger sweep.

This case demonstrated the importance of avoiding the blind finger sweep due to the risk of unintentionally causing the ingested object to lodge in the airway. According to the current Paediatric Advanced Life Support guidelines, manual removal should be avoided except in cases where the object is visible in the oral cavity.⁷ Abder-Rahman *et al*⁸ reported that among 26 cases of choking caused by foreign bodies during a 10-year period from 1996 the blind sweep was responsible for exacerbating the situation in three cases. It was also reported that the blind finger sweep could cause traumatic epiglottitis and foreign body impaction in the trachea, potentially leading to complete airway

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Figure 1 (A) Chest X-ray film: posterioranterior view. (B) Chest X-ray film: lateral view. The X-ray photos showing a circular, non-opaque object at the level of the nasopharynx.

obstruction.⁹ Therefore, the blind finger sweep should be avoided in cases of paediatric foreign body ingestion. Instead, the patient should be taken immediately to the nearest ED.

Learning points

- ▶ This is a rare complication caused by a blind finger sweep of the oral cavity resulting in the migration of a foreign body into the nasopharynx.
- ▶ Physicians should be aware in their clinical assessment that a blind finger sweep can cause an orally ingested object to lodge in the nasopharynx.
- ▶ Parents should be advised to avoid trying to remove an object ingested by their child using the blind finger sweep, and instead to take the patient immediately to the nearest emergency department.

Contributors TM was involved in clinical care of the patient, conceptualised the report, interpreted the data and drafted the initial manuscript. NI collected the manuscript. All the authors reviewed and approved the final manuscript as submitted.

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