

Case Report

Unusual case of mobile phone simulation SIM card's outer case ingestion: wedged at laryngeal surface of epiglottis

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ABSTRACT

Accidental ingestion of foreign bodies in the pediatric population is usually small pieces from toys or other household objects and subsequent emergency department attendance is a common occurrence. Here we describe an unusual case of accidental swallowing where the foreign body is outer case of mobile phone simulation (SIM) card.

Keywords: Accidental ingestion, Foreign body, SIM card, Throat

INTRODUCTION

Accidental ingestion of foreign bodies in the pediatric population are usually small pieces from toys or other household objects and subsequent emergency department attendance is a common occurrence.¹ The technical improvements has facilitated the retrieval of foreign bodies by utilizing various advancements such as rod lens, video endoscopy, a broad range of a variety of sized forceps and safer anaesthesia. Despite of these advancements, more than 3000 deaths occur per year because of foreign bodies and an untold number of patients survive with variable sequelae.²

Foreign bodies may get lodged in tonsil, base of tongue, pyriform fossa, and oesophagus or sometimes in the larynx or lower down in the respiratory tract leading to medical/surgical emergencies which are often challenging to an otorhinolaryngologist. Most of the foreign bodies in pharynx usually get stuck at the level of cricopharynx or down in the right bronchus or lower lobe when the larynx is small. Occasionally the foreign bodies in the larynx may end fatally.³ Swift removal of the foreign body is pivotal to thwart complications of hoarseness,

odynophagia, dyspnoea, stridor, hemoptysis or respiratory obstruction.⁴

Most of the time, the ingested material is a household item. However, here we describe an unusual case of accidental swallowing where the foreign body is outer case of mobile phone simulation (SIM) card.

CASE REPORT

A 13 year old male patient reported to the department of ENT at GGS medical college, Faridkot with chief complaint of hoarseness of voice from last 1 week. On further enquiring the past history of the patient, it was revealed that he had taken the outer lining of SIM card, after removal of SIM, was playing with it by placing it in mouth and unfortunately, it was swallowed by him accidentally. After ingestion of it, patient was taken to the local practitioner and was advised him to return if he developed further abdominal pain, or vomiting, and warned him of the small chance of perforation and bowel obstruction. Patient was perfectly well after that and just 1 week before he gave history of hoarseness of voice. Historically, no episode of apnoea or dyspnoea was reported by the child. The child was comfortable, playful

and showed no signs or symptoms suggestive of foreign body ingestion. Examination of the oral cavity was normal. Patient was advised digital X-ray neck: antero-posterior and lateral view. A lateral view X-ray soft tissue neck showed foreign body at the level of C4 vertebrae (Figure 1a and b). Direct laryngoscopy under general anaesthesia using short-acting anesthetic agents showed outer part of SIM card (Figure 1c and d) lying at the laryngeal surface of epiglottis. The foreign body was grasped with foreign body holding forceps and pulled out. The child was discharged next day.



Figure 1 (a): antero-posterior and lateral X-ray neck; 1 (b): lateral X-ray neck revealing foreign body at C4 level; 1 (c): removal of sim card outer case with foreign body holding forceps; 1 (d): SIM card outer case.

DISCUSSION

Aspiration of a foreign body happens either with things that have been put into the mouth and displaced accidentally posteriorly or with objects that are encountered in food unexpectedly.⁵ A foreign bodies in nose, ear and throat is any item which is placed in the nose, ear and throat that is not meant to be there and it can cause harm by its mere presence if immediate medical attention is not sought. Foreign bodies may be categorized as animate and inanimate. The inanimate FB can further be divided into vegetative and non-vegetative foreign bodies, as well as hygroscopic and non-hygroscopic.⁶ The vegetative inanimate includes seeds, peanuts, grains, peas, etc., vegetative animate includes insects, etc. whereas non-vegetative consists of fish bone, safety pins, plastic toys, denture plates, beads, coins, dental appliance, stones, earrings, etc.^{3,7}

The present case is unusual as it presents accidental swallowing of outer case of mobile phone simulation card as foreign body. Literature reports only one case of accidental ingestion of a SIM card by Dixit et al in which no foreign body was found on examination and patient was advised to return if he further develops vomiting or abdominal pain.¹

Laryngeal foreign body is encountered less commonly than bronchial foreign body, but is potentially more dangerous. Diagnosis is made by clinical and radiological examination. The foreign body in larynx needs immediate intervention as delayed intervention can lead to death of the patient. Laryngeal impaction of foreign body is rare, because most of the aspirated foreign bodies pass through laryngeal inlet and get lodged down in the airway. The present case represents a rare case of laryngeal foreign body i.e. outer part of SIM card (figure 1 c and d) lying at the laryngeal surface of epiglottis that presented patient to the department with chief complaint of hoarseness of voice.⁸

The occurrence of the foreign body in the airways is around 0.60% among the total foreign bodies. This is due to anatomical protection of the airways with epiglottis, arytenoids as well as coughing reflexes.⁷ In the present case also, epiglottis provided protection against aspiration of SIM card remnants into airway passage.

The first imaging step in suspected cases of foreign-body ingestion is usually radiography. The initial standard imaging protocol includes frontal and lateral radiographs of the chest, neck and abdomen. The inclusion of neck and abdomen in the imaging evaluation is imperative as chest radiographs mere may lead to failure in detection of multiple foreign bodies, objects higher than the thoracic inlet, or objects that have passed the pylorus. Lateral views are also pivotal to confirm location.⁹ In the present case patient was advised digital X-ray neck: antero-posterior and lateral view. Moreover, only lateral view revealed foreign body at the level of C4 vertebrae which was not apparent at the antero-posterior view.

Endoscopic removal of foreign body of the respiratory tract is preferred under general anesthesia. Unless the foreign body is visible in the airway, the trachea should be intubated with one size smaller endotracheal tube without muscle relaxant.¹⁰ In the present case, as foreign body was at epiglottis region, so intubation could not be planned. Positive pressure ventilation could have pushed it down towards trachea. In this case, patient was induced with nitrous oxide and oxygen (50:50) and isoflurane after glycopyrrolate premedication to decrease secretions and obtund autonomic reflexes of airway instrumentation. During direct laryngoscopy, the foreign body, i.e. the outer case of SIM card, was visible lying at the laryngeal surface of epiglottis, which was promptly taken out with a foreign body holding forceps. Short-acting anesthetic agents were used for rapid and complete recovery.

CONCLUSION

In the present case epiglottis provided protection against aspiration of foreign body i.e. remnants of mobile phone's SIM card case into airway passage and fortunately saved child from complications. Diagnosis is clinical and radiological, and intervention should be as quickly as possible as most complications, including death, are resultant from delay in performing the management procedure.

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