

Pencil in the pharynx: Case report of a penetrating foreign body

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ABSTRACT

Pharyngeal foreign bodies are commonly encountered in otolaryngological practice. However, in certain instances, particularly in cases of penetrating injuries, major vascular damage leads to severe morbidity and mortality. Management of these cases includes airway protection, bleeding control, imaging of major vascular injury, and prophylactic antibiotics. The case of a 2-year-old patient with penetrating pharyngeal foreign body is described in the present report.

Key words: Foreign body; oropharynx; penetrating injury.

INTRODUCTION

Foreign body cases are common in otolaryngological practice, usually occurring in children.^[1,2] Foreign bodies are often observed in the ear and nose, while pharyngeal foreign bodies are less common. Presently described is the management of penetrating pharyngeal foreign body injury in a 2-year-old boy, as well as current references in the literature.

CASE REPORT

A 2-year-old boy fell prone while playing, with a pencil in his mouth, and the pencil penetrated his pharynx. Upon admission to the emergency department, his vital signs were normal, but he was anxious. When clots in the oral cavity were removed, no bleeding was observed in the oropharynx. The pencil was located behind the right posterior plica (Fig. 1a, b). The other end of the pencil was palpable in the right

occipital area, but the skin was intact (Fig. 1c). Neurological examination was normal. Upon computed tomography (CT) and CT angiography examinations, a foreign body was observed through the right posterior pharyngeal area, reaching the right occipital area. The foreign body was on the medial side of the internal carotid artery and very near the right vertebral artery. No vascular injury, aneurysm, or extravasation was observed (Fig. 1d, e). Removal of the foreign body in the operating room by otolaryngology and neurosurgery teams was planned. Due to the possibility of intubation failure, tracheotomy conditions were prepared. Orotracheal intubation was successful, and the pencil was carefully removed. Only blood leakage was observed. The wound was sutured (Fig. 1f, g). The patient remained in the intensive care unit for 1 day. Broad-spectrum antibiotics (ampicillin, sulbactam, and clindamycin) were administered. Bleeding and respiratory distress were not observed at follow-up. Oral feeding was initiated at the 48th postoperative hour. The patient was extubated on the 3rd day. No complication was observed.

DISCUSSION

Pharyngeal foreign bodies frequently occur in children. A child with acute respiratory distress and abundant secretion who refuses food and drink must be suspected of pharyngeal foreign body.^[3] Neck examination must be performed in such cases, during which the foreign body may be palpated, and emphysema and edema may be observed.^[4] Patients with

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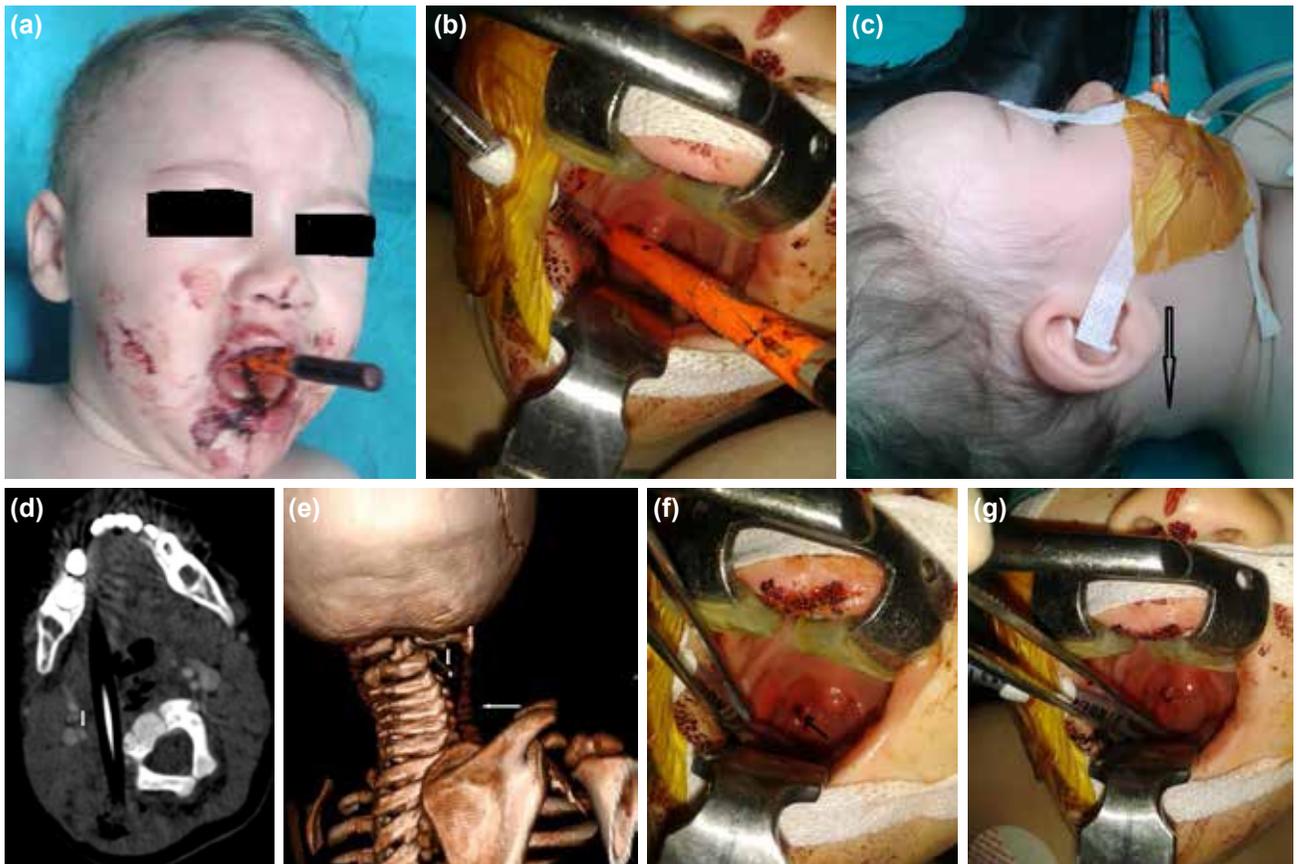


Figure 1. (a) Penetrated pencil is seen in the mouth. (b) Closer sight of the pencil. (c) Arrow points to end of the pencil reaching occipital area. (d) CT imaging. Foreign body and vascular structures are seen. Arrow points to carotid artery. (e) 3-D CT imaging. Upper arrow points to foreign body and below arrow points to carotid artery. (f) Oropharynx after removing the pencil. (g) Sutured area in the oropharynx.

acute respiratory distress due to foreign body may be mistakenly diagnosed with croup.^[3]

Penetrating pharyngeal injuries usually occur in children who fall prone while walking with a foreign body in their mouths.^[5,6] This injury is most frequently observed in boys, with a boy:girl ratio of 3:1. However, exact data regarding frequency of this injury is not available.^[5] The most frequently observed foreign bodies are toothbrushes, cylindrical toys, and pencils.^[5] In penetrating pharyngeal injuries, the soft palate and tonsils are usually affected. Injuries to the hard palate, tongue, and posterior oropharyngeal area are less common.^[5] In the present case, the foreign body penetrated through the posterior pharyngeal wall.

The pharynx of a child is soft, and foreign bodies can pass easily through the posterior wall, injuring the carotid artery. If severe injury is suspected, 3-dimensional CT must be performed instead of simple removal procedure. CT angiography may be performed, when necessary, to exclude major vascular injuries.^[4] In the present patient, major vascular injury was excluded by CT and CT angiography prior to removal of the pencil.

In penetrating pharyngeal injuries, severe complications are rare, though morbidity and mortality have resulted in some

cases.^[7] Carotid artery damage, neurological sequels due to thrombosis, airway obstructions, sepsis, shock, cervical emphysema, pneumothorax, and pneumomediastinum are severe potential complications.^[4,8] Bleeding can be severe, requiring urgent repair. In these cases, consultation with a cardiovascular surgery team is necessary. If repair cannot be performed, carotid artery ligation must be considered as a last resort.^[4]

Management of these cases varies. The patient must be followed for at least 72 hours, and oral feeding must be stopped, due to possibility of reoperation. Prophylactic antibiotics must be administered.^[6] In present case, oral feeding was stopped, antibiotics were administered, and the patient was followed for 72 hours.

Pharyngeal foreign body is a medical emergency.^[3] Delay of intervention can cause respiratory distress, due to edema and infection such as retropharyngeal abscess. Early intervention must be performed to prevent development of aspiration and edema.^[3] During intervention, tracheotomy conditions must be prepared.^[9]

Conclusion

In cases of penetrating pharyngeal injuries, severe compli-

cations are rare, but may result in morbidity and mortality. The pharynx of a child is soft– foreign bodies can easily pass through the posterior wall, injuring the carotid artery. Due to the possibility of major vascular injury, 3-dimensional imaging and angiography must be performed when necessary. Intervention must take place under general anesthesia, and tracheotomy conditions must be prepared.

Conflict of interest: None declared.

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OLGU SUNUMU - ÖZET

Farinkste kalem: Delici bir yaralanmanın olgu sunumu

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Faringeal yabancı cisimlere kulak burun boğaz hastalıkları pratiğinde sık rastlanılır. Ancak özellikle delici yabancı cisimlerde büyük damar yaralanmasına yol açarak ciddi morbidite ve mortalite sebebi olabilirler. Bu hastaların yönetimi havayolunun korunması, kanamanın kontrolü, büyük damar yaralanmasının görüntülenmesi ve profilaktik antibiyotiji içerir. Yazıda, iki yaşında bir delici faringeal yabancı cisim olgusu ve eşliğinde bu olgulara yaklaşım sunulmuştur.

Anahtar sözcükler: Delici yaralanma; orofarinks; yabancı cisim.

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