

Facial Paralysis Caused by a Foreign Body from the Palate Veil Reaching the Parotid Region: Report of a Case

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Abstract

Case Report

Introduction: Oropharyngeal foreign bodies are a relatively common emergency in pediatric population. They rarely pose a diagnostic problem, but remain a fear for the ENT surgeon. We report the observation of a foreign body lodged in the oropharynx arriving in the parotid region in order to discuss the diagnostic and therapeutic approach.

Observation: 03-year-old male child admitted to the pediatric emergency room for oropharyngeal trauma following an accidental fall on a ballpoint pen. The examination revealed the foreign body (pen cap) penetrating the soft palate reaching the right parotid region palpable under the sublobular skin complicated by immediate and complete ipsilateral peripheral facial palsy. The foreign body was extracted intraorally under general anesthesia after surgical exploration of the facial nerve. The postoperative period was marked by the regression of facial paralysis. **Conclusion:** This type of foreign body in the oropharynx is a medical and surgical emergency. Easy to diagnose, these foreign bodies pose above all a problem of lesion diagnosis and therapeutic attitude. Therefore, their prevention remains the essential weapon.

Keywords: Foreign body, soft palate, Trauma, post traumatic facial paralysis, Prevention.

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INTRODUCTION

Foreign bodies penetrating the oropharynx are a relatively common pathology in pediatric emergency rooms. Most often occur during swallowing [1, 2]. They are sometimes due to trauma. They rarely pose a problem of positive diagnosis but remain an obsession for the attending physician because unrecognized or poorly treated; these foreign bodies can develop into serious complications and generate considerable anatomical and functional loco-regional aftermath, justifying special attention and urgent rigorous care [1, 3].

We report the case of an enclosed foreign body of the oropharynx complicated by peripheral facial paralysis observed in a young child after a trauma in order to discuss our diagnostic and therapeutic approach according to the data in the literature.

OBSERVATION

It is about a 03-year-old male child, with no particular pathological history, admitted to the pediatric emergency room for an oropharyngeal trauma that occurred the same day following an accidental fall on a ballpoint pen. According to the parents, the child would have fallen from his bicycle in a playful accident while putting the pen in his mouth. This was followed by landing on the face causing the foreign body to sink into the pharynx with oral bleeding and hypersalivation without initial loss of consciousness. The admission examination found a conscious child, Glasgow score 15/15, hemodynamically and respiratory stable. Examination of the oral cavity revealed the foreign body (pen cap) penetrating the soft palate, only the sharp tip was visible through a dilapidated non-bleeding wound (Figure 1). The rest of the pen cap was sunk deeply into the soft palate. Its penetrating tip was palpable and noticeable in relief under the skin under the lobule of the right ear in the parotid region (Figure 2).



Fig-1: Penetrating pen cap



Fig-3: Complete right peripheral facial palsy on admission



Fig-2: Relief of the penetrating palpable tip of the foreign body under the right ear lobule

Neurological examination revealed complete and immediate right ipsilateral peripheral facial paralysis grade VI of House and Brackmann (**Figure 3**). The remainder of the ENT examination was unremarkable, including no emphysema, hematoma or other signs of vascular involvement.

A head and neck CT-scan was performed urgently in order to study the relationship of the foreign body with the neighboring noble structures (Carotid ++). It revealed the foreign body passing obliquely through the right latero-pharyngeal space. It crosses the ipsilateral medial pterygoid muscle then the deep lobe of the parotid gland and comes into contact with the superficial lobe. It pushes back the external carotid with a parenchymal border of 2.2mm from it. The internal carotid and the homolateral VJI remain at a distance of 6mm (**Figure 4**).

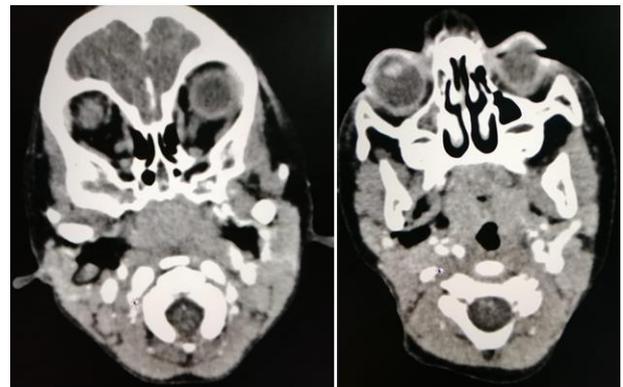


Fig-4: Head and neck CT scan showing the relationship of the foreign body with the neighboring anatomical structures

The patient was rushed to the operating room. The foreign body was extracted intraorally under general anesthesia after first exploring the facial nerve.

After the right Redon incision and detachment of the flap, the facial nerve trunk and its branches was easily identified by its surgical landmarks (posterior belly of the digastric muscle, the tragal point). The

penetrating tip of the pen cap was visible behind the trunk of the facial nerve, coming into intimate contact with it without gross injury or macroscopic lesions (Figure 5). The immediate decompression was made by the delicate extraction intraoral of the foreign body, taking its entry path under visual control from the side of the nerve (Figure 6).



Fig-5: Intraoperative images showing the foreign body (blue pen cap) visible behind the facial nerve bifurcation



Fig-6: Image of facial nerve after decompression by intraoral extraction of the pen cap

After extraction, we found a rounded non-hemorrhagic wound of about two centimeters in the soft palate. It was sutured with absorbable 3/0 suture. The patient received additional medical treatment with antibiotic therapy (amoxicillin + clavulanic acid), pain reliever, mouthwash and cold fluid intake for next 10 days.

Postoperative follow-up was marked by regression of peripheral facial paralysis turns into grade IV of House and Brackmann upon awakening and persisting after 72 hours of monitoring (Figure 7).



Fig-7: Postoperative images at 48 hours for a slight improvement in facial paralysis

A check was made on 10th postoperative day. The pharyngeal wound healed perfectly and the child was able to eat properly. The child kept the same grade of peripheral facial palsy at control.

DISCUSSION

Foreign bodies in pediatric ENT are diverse in nature (pencil, pointed or cylindrical toys, meat or chicken bones, pieces of meat, fishbones, pieces of wood, fruit stones, coins, pacifiers, toothbrushes) [1]. They apply to all ages from the gripping age. They are sometimes viewed and removed at home by parents as soon as they are introduced. Although sometimes it can be a perfectly harmless incident, foreign bodies can become trapped in the pharynx, the esophagus or even the lower respiratory tract and be life-threatening or functional. Those of the oropharynx are relatively common [2, 4]. Penetrating pharyngeal trauma typically occurs in children who fall prone when walking or running with objects held in the mouth at the time of the trauma [5, 6]. These are "pencil injuries" described by the Anglo-Saxons [7, 8]. In our case, it was a pen cap, for school use. Those traumas are most often seen in boys, with a boy / girl sex ratio of 3/1 [5]. The most affected areas are the soft palate and tonsils. Involvement of the hard palate, tongue and posterior oropharyngeal region are less common [5]. Their diagnosis is easy and requires a good initial clinical examination [8]. The difficulty lies in the assessment of the lesion assessment and the therapeutic attitude. A child's pharynx is soft, and foreign bodies can easily pass through its walls and traumatize surrounding anatomical structures.

Penetrating lesions of the pharynx rarely cause serious complications, although their morbidity and mortality have been described in the literature [10]. Nerve damage, vascular damage (carotid artery), neurological sequels due to thrombosis, airway obstruction, sepsis, shock, emphysema, pneumothorax and pneumomediastinum are serious potential complications [4, 8]. In our case, the major complication was peripheral facial palsy.

In order to establish a complete lesion assessment and look for complications, a head and neck CT scan should be performed instead of a simple extraction if serious injury is suspected. Computed tomography angiography may be done, if necessary, to rule out major vascular damage [11]. Other authors have also described the value of standard radiography [1, 3] in order to look for, in addition to a small radiopaque foreign body, signs of complications [5] such as retropharyngeal emphysema.

In the literature, two therapeutic attitudes coexisted. Exploratory cervicotomy for the penetrating foreign body [1, 9] and endoscopy or natural route for other types of foreign body [12-15].

For OUOBA [9], endoscopic examination is justified whenever the simple clinical examination is difficult or insufficient. They reported the case of a two-year-old girl with a broom twig that accidentally entered the oropharynx during trauma, only to exit through the external ear canal. INCOLLINGA *et al.* [13] reported the case of a 12 year old girl with pen penetration into the palate while playing with it in the mouth. DOUMBIA-SINGARE K [12] reported the case of a for [2, 4, 5]. The unknown pharyngeal foreign bodies, badly treated, sharp or pointed, progress towards infectious, vascular and neurological complications [5].

We proceeded in our therapeutic attitude to the extraction of the foreign body after performing a preoperative computed tomography as well as a surgical exploration allowing a precise lesion assessment.

The therapeutic attitude therefore varies depending on the type of foreign body, its mechanism and the presence of any complications. A pharyngeal foreign body is a medico-surgical emergency [3]. The delay in treatment can cause respiratory distress, due to edema or infection such as a retropharyngeal abscess and many other serious and significant complications. In our case, the main emergency was decompression of the facial nerve.

The patient should be followed for at least 72 hours and oral feeding should be discontinued, due to the possibility of surgical revision. Prophylactic antibiotics should be administered [6].

CONCLUSION

Foreign bodies in the oropharynx rarely pose diagnostic or therapeutic difficulties. It is a common pathology and its severity varies widely. Their prevention remains the essential weapon.

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