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CASE REPORT

Removal of Foreign Body in the Rafe Pterigomandibular: Case Report

Remoção de Corpo Estranho Alojado na Rafe Pterigomandibular: Relato de Caso

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Abstract

Introduction: Penetrating lesions in the oral cavity, caused by foreign bodies, is an event of significant clinical relevance and presents itself as an important etiological factor, especially in pediatric patients. Several objects are related to this type of trauma, such as knife blades, nails, pencils, wood, firearm projectile, and glass, among others. **Case Report**: This report describes a case of removal of a pencil lodged in the left pterygomandibular raphe of a pediatric patient, as well as all the conduct adopted by the team of surgeons. **Discussion**: Pterygomandibular raphe has an intimate relationship with noble structures, and injuries by penetrating instruments in this region can result in important clinical repercussions. Due to this, it is necessary to have an efficient clinical-anamnesis examination, with adequate analysis of the affected structures, in order to provide a fast and effective treatment. **Conclusion**: For this, it is essential to have qualified professionals, adequate equipment available, and the proper management of the victim.

Keywords: trauma; penetrating injuries; oral cavity.

Resumo

Introdução: As lesões penetrantes em cavidade oral, ocasionadas por corpos estranhos, é um evento de relevância clínica significativa e se apresenta como um importante fator etiológico, principalmente, em pacientes pediátricos. Diversos objetos estão relacionados a esse tipo de trauma, como lâmina de faca, prego, lápis, madeira, projétil de arma de fogo, vidro, entre outros. **Relato de Caso**: Este relato descreve um caso de remoção de um lápis alojado na rafe pterigomandibular esquerda de um paciente pediátrico, assim como toda a conduta adotada pela equipe de cirurgiões. **Discussão**: A rafe pterigomandibular possui uma íntima relação com estruturas nobres e as lesões por instrumentos penetrantes nessa região podem acarretar uma repercussão clínica importante. Devido a isso, se faz necessário, um exame clínico-anamnese eficiente, com análise adequada das estruturas acometidas, para assim fornecer um tratamento rápido e eficaz. **Conclusão**: Para isso, é fundamental profissionais qualificados, equipamentos adequados disponíveis e o manejo adequado da vítima.

Palavras-chave: : trauma; lesões penetrantes; cavidade oral.

INTRODUCTION

Maxillofacial traumas are of heterogeneous etiology, and their clinical characteristics are directly related to the mechanism of the trauma, the kinetic energy involved, and the anatomical structures affected[1].

Thus, penetrating lesions in the oral cavity, caused by foreign bodies, is an event of significant clinical relevance and presents itself as an important etiological factor, especially in pediatric patients, since it is common in childhood the habit of putting certain objects in the mouth[2,3].

Therefore, the greater the mass and speed of the aggressor foreign body, the greater the extent of the injury, as well as determine the complexity of the trauma, and may lead to airway obstruction, vascular injuries, intracranial injury, or any adjacent vital structure. Therefore, the severity of the trauma will determine the appropriate therapy, and the role of the professional involved will determine the best conduct and approach for the victim involved, with the oral and maxillofacial surgeon being a fundamental part of this process[1,4].

Several objects are related to this type of trauma, such as knife blades, nails, pencils, wood, firearm projectile, and glass, among others.5 Thus, the risk of contamination and the precaution against infections are other relevant factors to be considered in the treatment of these open wounds[6].

In addition, due to possible late complications, it is extremely

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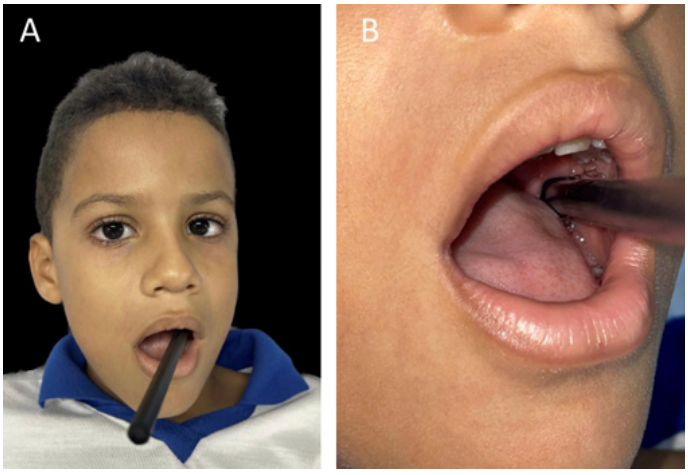
important to detect any foreign bodies during the clinical evaluation of the patient. When the clinician is not conclusive, the use of complementary exams such as radiographs or computed tomography of the face may be necessary[7].

This report describes a case of removal of a pencil lodged in the left pterygomandibular raphe of a pediatric patient, as well as all the conduct adopted by the team of surgeons. Thus, its purpose is to present the clinical aspects of the case in question, a brief anatomical review of the pterygomandibular region and the structures associated with it, any complications involved in this type of trauma, and the correct management of the victim in this situation.

CASE REPORT

A male patient, 6 years old, with faioderma, attended the emergency room of the General Hospital of the State in Salvador-Bahia, attending with trauma in the face one hour after the accident. The person in charge reported that the patient was at school at the time of the trauma, with a pencil in his mouth, when he accidentally fell.

Figure 1. Patient with the pencil lodged in the left pterygomandibular raphe in both images (A and B).



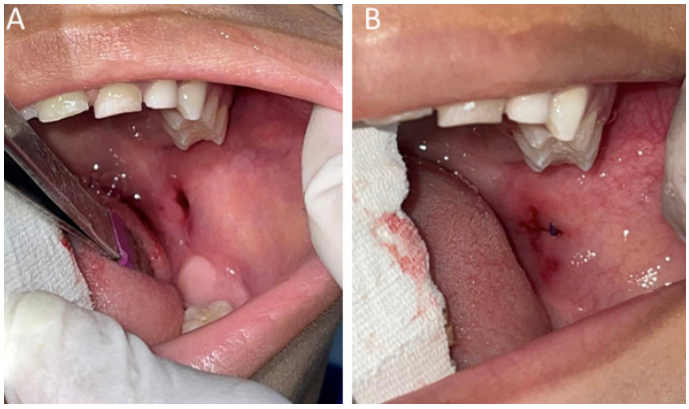
During the first evaluation with the hospital's Oral and Maxillofacial Surgery and Traumatology team, it was on alert, glasgow coma scale equal to 15, in good general condition, eupneic in ambient air, normal, responsive, without active bleeding and with pain complaints in the face.

On physical examination, the preserved bone contours were observed in all thirds of the face, with the presence of the foreign body (pencil) lodged in the region of the left pterygomandibular raphe. No significant bleeding was observed since the pencil completely sealed the inlet hole. However, the patient had difficulty in verbalization and the impossibility of dental occlusion due to the mechanical impediment caused by the foreign body. The dental structures were preserved, and the patient did not report hypoesthesia in any region of the face.

According to the clinical signs, it was not considered necessary to use a complementary imaging examination to conclude the diagnosis since a relatively small portion of the pencil had been lodged, in addition to the absence of signs suggestive of impairment of important structures.

Therefore, it was immediately performed, under local anesthesia, removal of the foreign body, debridement, cleaning of the wound with 0.9% saline, and suture with Vicryl 4-0. Then, anti-tetanus prophylaxis was instituted because those responsible did not remember if it had already been performed before the trauma.

Figure 2. Injury generated by the foreign body after its removal observed in the transoperative period (A) and immediate postoperative image with suture in position (B).



Subsequently, the patient continued under the care of the hospital team, under observation, progressing without complications, until receiving hospital discharge on the same day. The patient and guardians were instructed to return on an outpatient basis only if they showed any sign of significant discomfort or infection of the site, but it was not necessary. The anti-inflammatory of choice for home use was ibuprofen 100 mg/ml, in solution, orally, for 03 days.

Figure 3. Pencil after its removal.

DISCUSSION

Many children have the habit of placing foreign objects in the oral cavity, since it is a means of exploration that many encounter, in addition to not sometimes being able to distinguish inedible from edible objects. In addition, distractions, such as the act of playing while exploring objects with the mouth, are revealed as the main cause of penetrating injuries in children[8]

The fall of the object taken to the mouth is the most common cause. The most frequently involved objects were toothbrushes, followed by cylindrical toys and wooden fragments. Due to the mechanism of trauma, the soft palate was the most commonly affected structure of the oral cavity[9].

The present case reveals the importance of the surveillance of children by those responsible, whether in a home, school, or recreational environment, to avoid such situations. Thus, instruction and education are of fundamental importance, but they will not always be enough, and depending on the anatomical structure affected, these lesions can be fatal.

The foreign bodies impacted in the oral cavity are a challenge for adequate surgical management since the mechanical impediment of mouth closure, lip sealing, and dental occlusion is a complicating factor in the treatment of these cases. In addition, when there is an airway impairment, the complexity of the trauma becomes even more critical due to the difficulty of ensuring a safe airway when necessary, showing the clinical relevance that involves this type of case[10].

Although the case presented did not occur as an airway impairment, the knowledge on the part of the team of surgeons of the possible risks involving this type of injury is fundamental for therapeutic success, especially within the urgency and emergency services.

In the aforementioned case, the affected region was pterygomandibular raphe. Thus, the knowledge of the adjacent structures and the possible clinical repercussions of the impairment of some of them are fundamental during diagnosis. The pterygomandibular raphe is the fibrous junction of the buccinator muscle and the upper constrictor muscle of the pharynx. The region corresponding to the pterygomandibular space, where the raphe is located, is related to very important structures for the lower third of the face. In addition to the inferior alveolar vascular-nervous bundle, the lingual nerve, the sphenomandibular ligament, the medial pterygoid muscle, and the medial portion of the mandibular branch pass through this region[11].

Therefore, during the clinical examination of the present case, it was important to evaluate the functions related to these structures to determine the appropriate conduct. Therefore, as the patient evolved with the absence of significant bleeding and absence of hypoesthesia on the face, it was concluded that such aforementioned structures were not affected, as well as other nearby structures. Another important factor to be considered was the size of the portion of the pencil that was impacted, suggesting a more superficial lesion.

Given the above, considering the clinical context, the complementary imaging examination proved to be dispensable, given the need for rapid surgical intervention. After the removal of the foreign body, the absence of significant bleeding confirmed the hypothesis of no vascular damage.

Due to the contamination of the housed object, after its removal, it is of fundamental importance to abundant clean and debridement the wound to avoid future damage or a possible infection[12]. In this way, those fragments of objects, when they are not detected and correctly removed, run the risk of causing serious infections, chronic healing disorders, and even the formation of granulomas[6,13].

After all this process, the synthesis of the lesion is another relevant factor since, when performed properly, it hinders contamination by the external environment. And finally, the size of the wound and the degree of contamination of the object will dictate postoperative care. In those lesions with greater impairment of structures and greater extension, it may be necessary to use antibiotics as a prophylactic in the postoperative period. However, with minor lesions with the absence of damage to vital structures, as in the reported case, the use of antibiotics can be ruled out. Thus, only an anti-inflammatory and general care such as proper diet and cleaning of the region, is already sufficient when aligned with a good surgical technique[6].

CONCLUSION

Pterygomandibular raphe has an intimate relationship with noble structures and injuries by penetrating instruments in this region can result in important clinical repercussions. Due to this, it is necessary to have an efficient clinical-anamnesis examination, with adequate analysis of the affected structures, to provide a fast and effective treatment. Thus, complementary imaging tests may or may not be required for diagnostic aid.

In this sense, for efficient treatment, it is essential to have qualified professionals, adequate equipment available, and the proper management of the victim, in addition to attention to possible complications, the severity of the case, and all the anatomical structures affected, offering the patient a better prognosis, as in the present case.

Finally, it is of fundamental importance to pay attention to individuals at school and preschool ages to avoid possible accidents. It is interesting that those responsible avoid allowing the oral handling of objects and toys by children, especially sharp ones since the rate of accidental penetrating accidents at this age is expressive.

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