



## **Palatal Foreign Body - A Case Report**

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### **Authors' contributions**

*This work was carried out in collaboration between all authors. Author SL referred the patient to our department and wrote the first draft. Authors ZI and MG searched the literature and helped in writing.*

*Authors ARA, VJD and LBB examined the patient, established diagnosis and reviewed the manuscript. Author LBB wrote the final version of the manuscript. All authors read and approved the final manuscript.*

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**Case Report**

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### **ABSTRACT**

**Aims:** Foreign bodies exerted in the palatal mucosa are extremely rare in clinical work. The aim of this case report was to describe a case of foreign body in the palate of an infant and to highlight that foreign bodies must be considered in the differential diagnosis of palatal lesions found in children.

**Presentation of Case:** A healthy 12-month child was brought by his parents to the Department of Oral Medicine, School of Dental Medicine, University of Zagreb, since the mother accidentally noticed something in the child's mouth, a week before. The child's pediatrician and the doctor of dental medicine had examined the child and referred him for CT scan and examination at department of maxillofacial surgery. The lesion was hard on palpation and it bothered him while feeding. The child's medical history was non contributory and he was not taking any medication. Clinical examination revealed an oval white lesion in central hard palate, smooth and hard on

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palpation. Surrounding mucosa appeared normal. While mother was holding the child, we opened his mouth and examined the edges of the lesion with the instrument Heidemann spatula. The lesion suddenly started to separate from palatal mucosa until it had completely fallen out. It turned out to be an artificial nail.

**Discussion and Conclusion:** Besides local trauma, foreign bodies of oral mucosa are potentially lethal because of the risk of ingestion or obstruction of respiratory tract. Differential diagnosis of palatal lesions in children should include a possible foreign body. A thorough clinical examination can prevent unnecessary diagnostic procedures and misdiagnosis.

*Keywords: Clinical examination; diagnosis; foreign body; oral mucosa.*

## 1. INTRODUCTION

Foreign bodies exerted in the palate mucosa are extremely rare in clinical work. These cases mostly occur in infants and children and present potential danger of ingestion or obstruction of airways. Characteristic texture of the child's palate, together with thumb-sucking habits which are frequent in children, favors the retention of a foreign object [1,2]. Clinical examination in children is sometimes challenging which can lead to misdiagnosis of a foreign body as some other oral lesion [1,3-5]. The aim of this case report was to describe a rare case of foreign body in the palate of an infant and to highlight that foreign bodies must be considered in the differential diagnosis of palatal lesions found in children.

## 2. PRESENTATION OF CASE

We report a case of a healthy 12-month male child who was brought by his parents to the Department of Oral Medicine, School of Dental Medicine, University of Zagreb, because the mother accidentally noticed something in the child's mouth, a week before. The lesion was hard on palpation and it bothered the child while feeding. The child's pediatrician and the doctor of dental medicine had examined the child and referred him for a CT scan and examination at maxillofacial surgery, but the parents have come to our Department, as suggested by the doctor of dental medicine, before they made the examinations they were sent to.

The child's medical history was non contributory and he was not taking any medication. The lesion appeared asymptomatic, except while eating or on palpation. Clinical examination revealed an oval white lesion in central hard palate, smooth and hard on palpation (Fig. 1). Surrounding mucosa appeared normal. While mother was holding him, we opened his mouth and examined the edges of the lesion with the instrument Heidemann spatula. The lesion suddenly started to separate from palatal mucosa until it has

completely fallen out. The underlying mucosa was little irritated and erythematous so it was wiped with antiseptic solution (chlorhexidine gluconate 2%). The removed object turned out to be an artificial nail that was pushed inside the palate (Fig. 2). A few days later the palatal mucosa showed complete healing.



**Fig. 1. Impacted object prior to removal**



**Fig. 2. Removed object - artificial fingernail**

### 3. DISCUSSION

Foreign bodies in oral mucosa are very rare, yet we have found some interesting cases in the literature. Besides local trauma, these lesions are potentially lethal because of the risk of ingestion or obstruction of respiratory tract. According to the literature data, foreign body aspirations are most frequent in children younger than five years, and they are the most deadliest in infants younger than one year [6]. Differential diagnosis without a detailed clinical examination may include different malignant tumours and cysts, such as eosinophilic granuloma, melanotic neuroectodermal tumor of infancy, sarcoma, osteolipoma, sphenothmoidal encephaloceles or odontogenic cysts [1,3-7]. Also, leukemic infiltrates, ulcerative and necrotic lesions or fungal infections should be considered, although these are also infrequent diagnoses in paediatric population. In children, a foreign body should always be included in differential diagnosis of palatal lesions. Besides artificial fingernails [3,8,9], foreign bodies reported in the oral cavity are pistachio nut shells [10], plastic stickers [10], buttons, plastic lids, parts of toys [12] etc. These reports mostly refer to very young children who can not speak for themselves so the oral lesion is often an accidental finding by their parents. It should be emphasized that sometimes the object can be attached to oral mucosa for a few months [13], making the establishing of a correct diagnosis difficult. Initial diagnosis often includes some of the previously mentioned differential diagnoses, and the patient is thoroughly processed (CT, exfoliative cytology, fine needle aspiration cytology) [3,4,10,11], but the findings are frequently misleading. For example, in case reports with CT finding of the lesion [3,4,10,11], radiolucent mass or cyst with radiopaque borders or calcified rim was found, but the CT finding did not contribute to setting the right diagnosis. Foreign bodies in these cases were artificial fingernail [3,4], pistachio nutshells [10] and a plastic sticker [11]. A definitive diagnosis was established during examination in general anesthesia, prior to planned surgical removal [3,4,10,11].

In case the patient is uncooperative, this contributes to referring to other specialists and makes it difficult to set up a proper diagnosis [5]. In some examples, patients have been examined by several different doctors until the correct diagnosis is established [10]. In uncooperative patients, clinical examination is difficult and the

lesion is misdiagnosed, which leads to avoidable examinations such as CT scan or examination in general anesthesia.

It is important to carefully plan and conduct a clinical examination. The edges of the lesion should be inspected and, in case of suspicion of a foreign body, the object should be removed in posteroanterior direction, while the patient is in a position that makes swallowing or aspiration difficult. It is recommended that the child is positioned laterally in the parent's lap, with his head lightly down [1].

### 4. CONCLUSION

Foreign body should always be included in differential diagnosis of palatal lesions in children. It is important to carefully inspect the edges of the lesion during clinical examination. A well conducted clinical examination can prevent unnecessary diagnostic procedures and misdiagnosis.

### CONSENT

All authors declare that 'written informed consent was obtained from the patient (or other approved parties) for publication of this case report and accompanying images.

### COMPETING INTERESTS

Authors have declared that no competing interests exist.

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