

Mysterious Case of Drooling Infant - Hidden Foreign Body over Hard Palate

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ABSTRACT

Foreign body over the hard palate is a rare clinical entity that happen almost exclusively in young pediatric age group with only about 40 odd cases ever reported. Most cases in the literature are described as incidental findings of hard palate mass causing heightened anxiety to parents and clinicians alike during routine oral cavity examination. Owing to its rarity and lackluster presenting symptoms, this simple condition are often overlooked but has high propensity to develop into life threatening condition if dislodged into the airway.

KEY WORDS

Foreign bodies, Hard palate, Infants, Oral cavity, Toys

INTRODUCTION

Ingested aerodigestive foreign body (FB) made up quite a significant number of emergency referrals to the otorhinolaryngology (ORL) clinic. Most FB tend to lodged at the tonsils, base of tongue or cricopharyngeus due to anatomical reasons but hard palate FB are rarely ever reported in the literature. 1, 2 Odynophagia, dysphagia and globus sensation are less perceivable in hard palate FB. Majority cases reported involve very young children who are poor historians, therefore, diagnosis of hard palate FB are mostly on diligent oral examination without forgetting the hidden and often missed subsite of oral cavity – the hard palate. We report a case of hard palate FB that was diagnosed and removed uneventfully in the clinic.

CASE REPORT

A 7-months-old infant was brought to the emergency department with chief complaint of excessive drooling. According to the parents, the drooling started about 1 week ago. The infant was previously seen twice by different outpatient clinic doctors and was diagnosed to have upper respiratory tract infection (URTI). The parents were reassured that URTI is a self-limiting condition. As the infant was active, afebrile and able to tolerate feeding well without any sign of respiratory distress, the parents waited for few days before deciding to visit the hospital. Preliminary physical examination, chest and skull radiograph done in the emergency department was normal. Developmental milestones, vaccination, drugs and family history were unremarkable. The infant was subsequently referred to the ORL clinic for further assessment.



Figure 1. Proper examination including restrain, adequate neck extension and good lighting revealed a translucent foreign body impacted over the hard palate.

Upon oral cavity examination, a translucent FB was seen stuck over the hard palate (Fig. 1). It was removed uneventfully using alligator forceps under direct visualization in the clinic. The FB was hard, semi-transparent, dome-shaped with smooth edges and concave center resembling a component that made up the eye of a soft toy (Fig. 2).

DISCUSSION

FB of aerodigestive tract in the pediatric population are commonly seen in the toddler age group with the peak incidence in 2-year-olds.^{3,4} In countries with predominant fish dishes such as Japan and East Malaysia, impacted fish bone in the pharynx contribute to the majority cases of aerodigestive FB.^{3,5} About 25-35% of FB impacted at the upper esophagus were coins as they are readily available in the house, conveniently serving as a toy for curious children.^{3,4} Hard palate FB happen almost exclusively in very young pediatric age group and can range from organic objects such as various nut shells to inorganic objects such as plastic caps and even small coin.^{1,2,6} This is because most hard palate FB are self-inflicted by playful and eager toddlers. In this case, the plastic toy might be inserted by another older sibling in the family. Some hard palate FB may even be embedded for months before presenting later as an incidental findings by the parents or clinicians.² Exact size of the FB in relation to this infant's hard palate made this object more conducive for adherence. This factor coupled with the concave part of FB created a strong suction effect on the hard palate. Preliminary diagnosis in referral letters such as neoplasia were made in 5 out of 7 cases of hard palate FB and this may cause unnecessary anxiety for the parents.¹ Longstanding hard palate FB may be confusing as there may be a thin mucosal layer covering it mimicking an oral cavity lesion like dentigerous cyst.^{1,7,8}



Figure 2. The round foreign body measured 1x1cm with concave center, perfect fit for this infant's hard palate.

The only presenting symptom for this case was drooling of saliva. The list of differential diagnoses for drooling is very extensive, ranging from developmental, physiological, emotional to structural abnormalities like oropharyngeal or esophageal lesions to gastroesophageal reflux, URTI and even drugs.⁹ Pediatric FB cases typically present with other symptoms such as odynophagia, dysphagia, voice changes, shortness of breath, noisy breathing, fever or refusal of food. This case was almost asymptomatic most likely due to atypical site of FB location which was the hard palate. Children, particularly very young ones may not be able to give reliable history and often posed as difficulty for clinical examinations, especially when they are fretful and uncooperative. Therefore, proper examination with the usage of tongue depressor and adequate lighting in neck extended and restrained position must be employed. In certain cases where complete visualization are impossible, digital examination to feel for FB may be useful. Referral to the ORL team for endoscopic examination can be made in suspicious cases. The hard palate FB in this case was missed by less observant parents and junior doctors in 3 different occasions but luckily life threatening condition such as FB dislodgement causing aspiration and upper airway obstruction did not take place.

Ingested FB in pediatric age group may present with a myriad of different symptoms and findings. Most hard palate FB cases are incidental findings due to less symptomatic progression of the disease. High index of suspicion, meticulous oral cavity examination, reevaluation of contradictory findings and early referral to the ORL team for further assessment are paramount in managing suspicious aerodigestive FB cases that can be catastrophic in event of aspiration.

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