

Unusual hard palate swelling in an infant: A case of impacted pistachio shell

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ABSTRACT

Children are prone to foreign body aspiration. Impaction of foreign bodies in the hard palate is a rare phenomenon. We present a case report where the infant's palatal swelling was mistaken for a tumor or cyst and was planned for excision and later turned out to be an impacted pistachio shell. We emphasize considering the foreign body as a differential diagnosis in children who present with unusual hard palate mass.

Key words: Foreign body, Hard palate, Infant, Palatine mass, Pistachio shell

Infants tend to explore things and insert every object into the oral cavity making them prone to aspiration. They often tend to ingest smaller objects and larger objects may get aspirated into the airway. Children < 5 years of age are prone to aspiration which is one of the leading causes of infant deaths [1]. Uncommonly, the foreign body may get retained and implanted over the palate which may lead to atypical presentation as they may not be symptomatic immediately and history cannot be elicited in infants and children, which leads to diagnostic and treatment challenges.

The main objective of the case report is to highlight the importance of considering foreign bodies in the differentials when evaluating palatine masses in infants and children.

CASE REPORT

An 11-month-old infant otherwise healthy was brought for consultation with a 3 days history of difficulty in taking feeds, especially with the feeding bottle. She was a full-term, born to non-consanguineous parents, with no prior hospital admissions. Parents noticed a yellowish swelling over the hard palate. Parents did not notice any swelling before this but were not sure of it, as they have not seen the palate in particular. The parents also noticed that the infant stopped thumb-sucking suddenly from the past 3 days.

On examination of the oral cavity, there was a smooth, yellowish-colored lesion over the hard palate in the midline measuring approximately 20 mm (Fig. 1a). On palpation, the lesion was firm to hard in consistency. The diagnosis of abscess

and cyst was made on inspection but on palpation, it was not consistent with a cyst or abscess. Other differentials considered were a tumor and an impacted foreign body.

Computed tomography (CT) of the oral cavity was advised to delineate the lesion extent and for characterization. The infant underwent CT during sleep time. CT revealed a well-defined smooth lesion over the oral aspect of the hard palate with a thin peripheral hyperdense rim and air pocket inside (Fig. 2). The lesion was very superficial and the underlying bone and periosteum were intact. The provisional diagnosis of the cyst with calcification or a foreign body was made.

The infant was planned for excision of a cyst or foreign body removal under general anesthesia. The infant was intubated with a size 3.5 endotracheal tube after inducing with sevoflurane gas and intravenous cannula placement. The lesion was examined under anesthesia and the presumptive diagnosis of a foreign body seemed more likely and was removed. As it was struck superficially to the palatine mucosa, it got easily detached when lifted with an 11-number surgical blade.

On examining the foreign body, it was a pistachio shell (Fig. 3). After removal, there were a few abrasions over the mucosa along the margins of the struck shell (Fig. 1b). There was no bleeding, and the child was extubated after the procedure and was discharged on the same day. The infant was reviewed after a week and was happy taking feeds and the mucosa healed completely.

DISCUSSION

Impacted foreign body over the hard palate in an infant is an uncommon entity. A thorough literature review showed case

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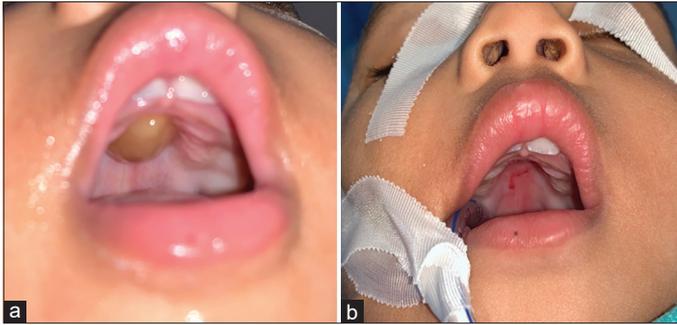


Figure 1: (a) Yellowish lesion seen over the hard palate in the midline and (b) small mucosal abrasions along the impacted shell



Figure 2: Coronal computed tomography image showing a well-defined lesion over the oral aspect of hard palate with smooth peripheral hyperdense rim with an airpocket within



Figure 3: The removed pistachio shell

reports where the implanted objects were screw caps, buttons, nut shells, bhindi, and false fingernails [2-5]. Pistachio shell with the concave inner surface can easily get stuck to the palate. If they are aspirated, they can get impacted in the bronchi leading to various complications [6]. The infant in the case report has a habit of thumb sucking and the anatomical configuration of the palate with feeding action makes the foreign body favorable for attachment [7]. If the foreign body is left in place for longer periods, eventually the mucosa encroaches from the ends and

grows over it. If they remain stuck for a prolonged duration, they may even ulcerate the hard palate and in extreme cases may even form a palatine fistula [8,9].

In the case reports reviewed, most of them were incidental findings. While considering the differential diagnosis of palatine masses in children, it is extremely helpful to obtain relevant history; however, it is quite challenging to obtain history in children. The infant in this case report showed a sudden onset change in feeding habits, however, the parents of the child examined the oral cavity only a day later. The pistachio shell's superficial layer has got dissolved and changed to yellow color which made it hard to recognize on visual inspection. The elder sibling of the infant has the habit of eating pistachios and throwing the shells everywhere; the infant would have probably picked up one and kept it in her mouth. CT, although associated with radiation, helped here to delineate the lesion and plan for surgery. Magnetic resonance imaging, although free of radiation, requires more time and may need general anesthesia in this age group.

The biggest risk of the foreign bodies is getting aspirated which may even lead to death. The reason for removing it under general anesthesia was the uncertainty of the initial diagnosis and the risk of aspiration while removing it in an infant is extremely high. Tumors and cysts in oral cavities are very rare in infants.

CONCLUSION

Foreign bodies impacted in the oral cavity can be extremely annoying for the parents and treating doctor and should be always included in the differential diagnosis when evaluating palatine masses in children. Parents and caretakers should be extremely vigilant with infants and toddlers to prevent such mishaps.

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