Incidental finding of an intranasal foreign body discovered on routine dental examination: case report

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Abstract

A nasal foreign body was discovered radiologically on an initial dental examination of a young child. The child was a candidate for dental rehabilitation, using nasotracheal intubation under general anesthesia. The parents were unaware of the object's presence, and the child had no nasal symptoms. The child was referred to the Otolaryngology-Head and Neck Surgery Service to have the object removed; this was accomplished successfully without sequelae on an outpatient basis. Dentists and physicians who treat children should be alert to the possible presence of intranasal objects in their patients.

Introduction

A thorough examination of the head and neck is requisite when examining a new dental patient. It is even more important when examining a young child, because of limited communication skills. The child should be examined for general development and appearance, appropriate size, normal functions, and evidence of trauma and pathology with special attention paid to the head and neck area.

Despite the reported decrease in dental caries, general and pediatric dentists frequently see children with nursing bottle caries. Many of these children are treated in the operating room under general anesthesia with nasotracheal intubation, because of their young ages, their inability to cooperate, and the extent of care that they need. Again, due to the child's young age and noncooperation, radiographs may be deferred until the child is under general anesthesia.

Removing foreign bodies from nasal cavities is common in a pediatric medical practice. Beans, peas, beads, watch batteries, chalk, peanuts, erasers, insects, and many other items have been placed in the nasal cavity (Baluyot 1980; Skinner and Chui 1986; Werman 1987; Fosarelli et al. 1988; Brownstein and Hodge 1988). Dental practitioners also have reported the incidental discovery of intranasal foreign bodies noted on radiologic examination, both in children and adults (Kuzy and Korbich 1982; Jones et al. 1987; Fagan and Mathewson 1990). Signs and symptoms of a foreign body include nasal occlusion, headaches, sneezing, nasal discharge, and epistaxis. Abscess formation with bone destruction may occur. The examiner may have no indication by history that an item has been placed or lodged in the nose. Foreign bodies in the nasal cavity can be difficult to manage. Attempts at removal may cause trauma and extensive bleeding, and can be so difficult that general anesthesia may be required (Baluyot 1980; Werman 1987; Votey and Dudley 1989). Attempts at removal also may cause the object to be pushed back further into the nasopharynx, potentially leading to aspiration of the foreign body and respiratory obstruction (Smith et al. 1989).

Following is a case report presenting the finding of an intranasal object which was discovered on a routine preoperative radiograph. The incidental discovery of the object assumes greater significance, because this child was scheduled to have undergone nasotracheal intubation.

Case Report

A 22-month-old black female presented to the U.S. Army Pediatric Dentistry Residency Training Program at Ft. Lewis, WA with a chief complaint of "rotten teeth." The mother had recently stopped giving the child a night- and naptime bottle on the advice of a neighbor. On examination, the child appeared healthy, well developed, well nourished, and in no acute distress. She was normal in appearance and of appropriate size for her age. Her medical history was noncontributory. The child was uncooperative for the oral examination, and was restrained by her father in the dentist knee-to-knee position to facilitate examination. Sixteen teeth (primary second molars not evident clinically) were present in various stages of eruption. All maxillary incisors had extensive caries and were broken down. Several of her primary first molars also had decay. The caries pattern was consistent with a diagnosis of bottle caries. The oral cavity was otherwise negative for pathology. After discussing the etiology of the dental problem and the treatment options available, the father decided that the dental disease should be managed in the operating room. Even though the child was uncooperative, it was

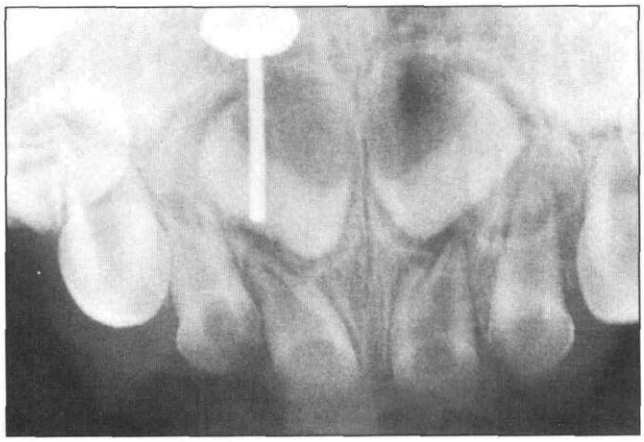

Fig 1. Maxillary occlusal radiograph showing carious maxillary incisor teeth and superimposed radiopacity.

decided to expose a maxillary occlusal radiograph at that time to determine the status of the maxillary incisors' periapical area.

Evaluation of the radiograph revealed a thin, radiopaque object with a cylindrical head. The object, which appeared to be an earring, seemed to be superimposed over the developing teeth, apparently in the right nasal cavity (Figure). On questioning, the father stated that his daughter had lost one of her birthstone earrings approximately six months ago. He and his wife had searched for the earring without success. The patient had no history of nasal symptoms.

The child was again restrained by the father in the dentist knee-to-knee position, and an otoscope was used in an attempt to visualize the object. A shiny object was noted approximately 1.5 cm inside the right nasal vestibule. The object appeared to be lodged solidly, and partly overgrown with tissue; therefore, a decision was made to refer the patient to the Otolaryngology-Head and Neck Surgery Service at Madigan Army Medical Center. The earring was removed without complications in the Otolaryngology-Head and Neck Surgery Clinic. The child subsequently underwent dental rehabilitation under general anesthesia without sequelae.

Discussion

Foreign bodies of the nasal cavity are so common an occurrence in pediatric and general medical practice that most are not reported in medical journals or even counted (Baluyot 1980). Clinically, the placement or discovery of intranasal objects seems to occur most commonly in younger children. The presence of a foreign body can be suspected by history or clinical signs, or incidentally discovered. The actual diagnosis is done by visual examination, assisted in some cases by a radiographic examination. Many items, including watch batteries and earrings, can be detected radiologically due to their radiopacity. Other common objects that children are likely to place up their noses, such as peas, seeds, peanuts, and small plastic toys, are radiolucent. Their presence usually is suspected by clinical history and confirmed by visual examination, or not suspected at all. (Computerized tomography also may be of value in detecting radiolucent objects, Morrison 1988).

Routinely incorporating an intranasal examination, or exposing a screening maxillary occlusal radiograph solely to detect objects is not warranted in a child's dental examination. However, dentists should remain vigilant for the presence of intranasal objects, especially if a history of chronic nasal discharge, foul oral odor, or foul nasal odor, is elicited. Awareness of this condition is especially advisable in children undergoing dental rehabilitation in the operating room. Where nasotracheal intubation is planned, dentists should consider exposing radiographs in the office, rather than waiting until the patient reaches the operating room.

Conclusion

Foreign bodies of the nasal cavity are a common occurrence in the young pediatric patient. Dentists should be aware of the signs and symptoms indicating their possible presence, and refer those cases in which a foreign body is suspected. In this case, discovery of an unknown intranasal object in a child scheduled for dental rehabilitation in the operating room prevented a potentially dangerous complication from occurring.

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Dentist musicians

Many dentists have a strong connection to music, according to an article by Gardner P. H. Foley in the *Journal of the American College of Dentists.*

- As a member of the Stonewall Jackson Brigade Band of Staunton, VA, Dr. William C. Shirley marched in every presidential inauguration parade from Taft to Truman.
- Dr. Forrest C. Castle of Kansas City was director of the 89th Division's musical organizations in World War I and later played with Sousa's band and other bands of national reknown.
- Harps made by Dr. Louis S. Field of Iowa were pronounced by experts to be equal in tone and finish to those produced in Italy.
- Dr. William B. Richter wrote many songs for Temple University, his alma mater. He is widely known for his *Miss America,* chosen by Atlantic City, NJ, as the official overture and closing song for its famous pageant.
- Dr. Julius Peters toured the country as a boy prodigy with the violin.
- Dr. Albert M. Bradner was the flute soloist in the Philadelphia Symphony Orchestra.
- Dr. Adelard J. Harper was choir director in Worcester, MS, churches for 50 years. He was director of the famous Gounod Male Quartette and director of the Philharmonic Choral Society of 450 members.
- Dr. H.D. Christensen made violins, copying the blueprints of famous violins, including a Stradivarius.
- In 1948, 76-year-old Dr. Daniel Gober was recognized as the oldest member of the Doctors' Orchestral Society of New York, which comprised 60 physicians, dentists and pharmacists.
- Dr. C.S. Harris wrote the music of three University of Pittsburgh (Pitt) songs: The Panther Song, the Battle Song and the Chant.
- Songs written by Dr. Klaypool A. Boland were recorded by Fred Waring and His Pennsylvanians and one of his more popular songs, *The Gypsy in My Soul,* was listed on the Hit Parade.