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Optical and Electrical Properties of CdS thin films prepared by spray pyrolysis

Medical Science

KEYWORDS : Naso-oropharynx, Foreign body, Rhinoscopy

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ABSTRACT

Summary

We are presenting the case of a 4-years-old-boy who accidently lodged a broken tooth brush in the naso-oropharynx. A variety of inhaled or ingested objects may harbour in the upper aerodigestive tract with varied shape, size & nature of objects and some of them may be undetected for a long time. The foreign body was confirmed by the X-ray skull, neck & chest lateral view and was retrieved under general anaesthesia

Introduction

Inhalation & ingestion through aerodigestive tracts are important for the support of the life and they should proceed with the utmost caution. The lodgement of naso & oropharyngeal foreign bodies are usually uncommon[1,2] because they are capacious, narrow calibre of nasal cavity preventing passage of foreign body into nasopharynx & nasopharyngeal isthmus preventing regurgitation of foreign body from oropharynx.[3] Dental cleaning by toothbrush in small children are very playful for them and cumbersome for their parents. Injudicious brushing technique can cause significant injury of soft tissue inside mouth as well as foreign body impaction in aerodigestive tract if part of the broken tooth brush is ingested or inhaled.[4]

Case presentation:

A 4-years old boy presented on the same day with history of accidental entry of a broken part of tooth brush inside the oral cavity during brushing of teeth of child by his mother. The child was breathing through open mouth with drooling of small amount of saliva from mouth. Clinically patient was nondyspnoeic with pain & difficulty in swallowing of water and food. The vitals were normal with equal air entry in both the lungs. Externally face & neck examinations showed no swelling and palpation was unremarkable. In ENT (ear nose throat) examination oral cavity was normal with small glimpse of some bristle of toothbrush with pooled saliva in oropharynx was seen ,indicating lodgement of broken toothbrush in naso oropharyngeal region.Both ears were normal on examination. On anterior rhinoscopy no abnormality detected. An X-ray skull, neck & chest lateral view showed impression of bristles of toothbrush head in the naso & oropharynx (Figure 1). The patient was planned for retrieval of foreign body under general anaesthesia After orotracheal intubation, the child was placed in supine position with head extended by placing a pillow under the shoulders and a rubber ring placed under the head for stabilisation. An appropriate size Boyle-Davis mouth gag applied and mouth opened. After retracting soft palate upwards by the anterior pillar retractor the toothbrush head along with its bristle exposed. Foreign body was retrieved by graspimg head of the toothbrush using curved long artery forceps along with some part of broken toothbrush handle attached with toothbrush head (figure 2). Naso & oropharyngeal suctioning done to clear the saliva. After extubation from general anaesthesia the patient was shifted to postoperative room. The patient was discharged after one day on oral medications with proper advice. Retrieval of the foreign body under general anaesthesia with orotracheal intubation.

Outcome and Follow up:

The postoperative period was uneventful, without any surgical procedure or anaesthesia related complications. The child was discharged after one day and after 7 days of follow-up child was absolutely

Discussion:

Nasal foreign bodies are very common paediatric ENT emergencies[5] , however any site of whole aerodigestive tract may lodge a foreign body depending on its nature, shape, size & age of patient. These foreign bodies may present with frank history of inhalation or ingestion, as in our case or after a long time with some complications related to the site of lodgement. Diagnostic modalities to find out such foreign bodies, it's possible locations and to rule out any suspected complication are either by direct visualization using rigid / flexibile nasopharyngoscope or radiological investigations like X-ray of skull, neck, chest & abdomen for radioopaque foreign bodies, computed tomography scan and magnetic resonance imaging are particularly helpful in radiolucent foreign bodies & cases having life threatening complications. In our case we retrieved the broken toothbrush head along with some part of its handle attached with it, and surprisingly the length of the attached part of handle was slightly bigger than its head, which we were not assuming after seeing tooth bristles impression on X- ray. Accidental entry of toothbrush inside oral cavity can cause minor soft tissue injury to penetrating injuries of parapharyngeal[6] & retropharyngeal[7,8] vital structures and even death due to trauma of internal carotid artery.[9] Nasopharyngeal foreign bodies may dislodge from the site during vigorous sneezing, coughing and in temptations to remove it manually causing serious obstruction to larynx & lower airway, so patient should be managed judiciously after full assessment with proper surgical technique & anaesthetic backup, keeping full watch of the patient vitals all the time till discharge.

Conclusion:

- The exact length of foreign body could not be correlated always with impression in the X-ray

• Never underestimate the size of foreign body on the basis of radioopaque shadow with missing radiolucent shadow

• Proper & supervised brushing technique in children should be implemented with possible use of flexible and non brokable handle of toothbrush

Figure 1. X-ray skull, neck & chest lateral view showing im-

Figure 2. The foreign body (Broken toothbrush head with its handle) after removal.

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