

## CASE REPORT

## An Unusual Foreign Body of Eight Months Duration in the Nasopharynx of a Three Years Old Child

<sup>1</sup>Alok Kumar Agrahari, <sup>2</sup>Suddhasheel Roy, <sup>3</sup>Rajiv Kumar Jain

### ABSTRACT

A unique case of a 5 cm long impacted broken toothbrush in nasopharynx of a 3-year-old male child is being reported. The foreign body remained impacted for a long period of 8 months. The toothbrush was visualized transnasally by endoscopy and removed per oral under general anesthesia.

**Keywords:** Foreign body, Nasopharynx, Unusual.

**How to cite this article:** Agrahari AK, Roy S, Jain RK. An Unusual Foreign Body of Eight Months Duration in the Nasopharynx of a Three Years Old Child. *Int J Otorhinolaryngol Clin* 2014;6(3): 140-141.

**Source of support:** Nil

**Conflict of interest:** None

### INTRODUCTION

A number of cases of foreign body of nasal airway and nasopharynx were reported earlier.<sup>1-6</sup> Foreign bodies of nasopharynx reported were usually introduced through nasal route. The presentation, duration and course of events of this case were extraordinary, and thus demanded a report. To the best of our knowledge no such case of impacted broken toothbrush in nasopharynx for such a long duration had been reported elsewhere till date.

### CASE REPORT

A 3 years old male child presented with bilateral nasal obstruction, nasal discharge and mouth breathing for last 8 months at the outpatient department of ENT, Institute of Medical Sciences, Banaras Hindu University, Varanasi, India on 23rd of August 2013. On detailed history taking, the parents revealed that a toothbrush broke accidentally at the handle and the broken part was ingested by the

child while brushing about 8 months ago. The broken end of the brush as mentioned had the bristles and part of the plastic framework (Fig. 1). It was followed by severe episodes of pain in throat, nausea and vomiting. The child was rushed to the nearby hospital and the attending physician suspected that the child might have ingested the broken part of toothbrush. However, according to the parents—no further intervention was undertaken by the attending physician. A few days later, the child developed a bilateral nasal obstruction, nasal discharge and later on he started mouth breathing.

On examination, anterior rhinoscopy did not reveal any positive finding except excessive nasal secretions and posterior rhinoscopy could not be undertaken in the child. X-rays PNS Water's view and lateral view of nasopharynx were advised but were inconclusive. Considering the risks of general anesthesia on a child for a diagnostic nasal endoscopy, a CT scan of nose, nasopharynx and paranasal sinuses was advised. It showed the exact pictographic view of the broken toothbrush embedded in the nasopharynx, the bristles were facing the nasopharyngeal isthmus (Figs 2 and 3). The child was then posted for the removal of the foreign body under general anesthesia.

Under general anesthesia, the toothbrush was visualized transnasally with 2.7 mm 0° endoscope. Under endoscopic guidance the bristles of the foreign body were held by a curved hemostat introduced per orally into the nasopharynx and the foreign body was removed successfully. It required to apply considerable



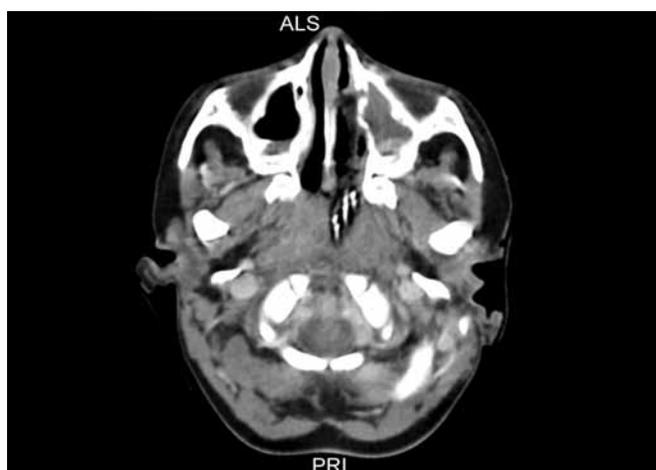
Fig. 1: The broken end of brush (foreign body) post removal

<sup>1,2</sup>Senior Resident, <sup>3</sup>Professor and Head

<sup>1</sup>Department of Otorhinolaryngology, Sri Guru Ram Rai Institute of Medical and Health Sciences, Dehradun, Uttarakhand, India

<sup>2,3</sup>Department of Otorhinolaryngology, Institute of Medical Sciences Banaras Hindu University, Varanasi, Uttar Pradesh, India

**Corresponding Author:** Alok Kumar Agrahari, Senior Resident Department of Otorhinolaryngology, Sri Guru Ram Rai Institute of Medical and Health Sciences, Dehradun, Uttarakhand, India, Phone: 09919820766, e-mail: alokagraharibhu@gmail.com



**Fig. 2:** Computed tomography scan nose and paranasal sinuses axial cut showing the location of the foreign body in the nasopharynx



**Fig. 3:** Computed tomography scan nose and paranasal sinuses parasagittal cut showing the location of the foreign body in the nasopharynx

force to dislodge the foreign body. The foreign body was approximately 5 cm in length. There was minor oozing from the nasopharynx after the removal which was then controlled easily.

Postoperative period was uneventful and there was no evidence of further nasopharyngeal bleeds. The child was discharged on the first postoperative day. On follow-up after 10 days, the child reported relief of nasal obstructions and discharge.

## DISCUSSION

Nasopharyngeal foreign body by ingestional route has been reported rarely in medical literature. This case is unique in many ways:

Firstly, the foreign body was accidentally ingested but was found lodged in nasopharynx. The episodes of vomiting suggested the mechanism by which the broken portion of the brush migrated from the lower aerodigestive tract to the nasopharynx. The foreign body was initially lodged, presumably in the cricopharynx which evoked gag reflex mediated nausea and vomiting. It was pushed up with the refluxate and became fixed in nasopharynx.

Secondly, the long interval (8 months) after which the child presented to the outpatient department. He had apparently manageable problems during this period.

Thirdly, the large size of the foreign body (5 cm) with respect to the size of the nasopharynx in the 3-year-old male child was somewhat extraordinary.

Finally, this case reiterates the importance of nasal endoscopy in cases of foreign body removal. Easy visualization of the relatively inaccessible nasopharyngeal area aided efficiency of the procedure.

## CONCLUSION

In conclusion, we wish to emphasize to consider hence forth nasopharynx as a possible site for foreign body lodgment while investigating to localize a foreign body.

As mentioned, no single instances of literature citation of a broken toothbrush as foreign body at nasopharynx appeared so far. The presentation, suggested mechanism and rarity of the type, size and location of the foreign body in this case, therefore, merits wide attention.

## REFERENCES

1. Tay AB. Long-standing intranasal foreign body: an incidental finding on dental radiograph. *Oral Surg Oral Med Pathol Oral Radiol Endod* 2000 Oct;90(4):546-549.
2. Saxena SK, Gopalakrishnan S, Ravi D. An unusual impacted foreign body in the nasopharynx. *Ind J Otolaryngol Head Neck Surg* 2002 Apr;54(2):151-152.
3. Eghtedari F. Long lasting nasopharyngeal foreign body. *Otolaryngol Head Neck Surg* 2003 Sep;129(3):293-294.
4. Gendeh BS, Gibb AG. An unusual foreign body presenting in the nasopharynx. *J Laryngol Otol* 1988 Jul;102(7):641-642.
5. Singh GB, Jha SK, Dhawan R, Dwivedi AK, Yadav M. Endoscopic removal of an unusual foreign body in the nasopharynx of an adult. *Am J Otolaryngol* 2008 Jan-Feb;29(1): 66-68.
6. Ogut F, Bereketoglu M, Bilgen G, Totan SA. A metal ring that had been lodged in a child's nasopharynx for 4 years. *Ear Nose Throat J* 2001 Aug;80(8):520-522.