

# Impacted Toothbrush in the Oropharynx: A Case Report

**Eustace Eromosele OSEGHLE, Emmanuel OKOEGUALE**

*[Department of Ear, Nose and Throat, University of Benin Teaching Hospital, Benin City, Edo State.]*

## **Correspondence**

*Dr. Eustace E. Oseghale*

*Department of Ear, Nose and Throat, University of Benin Teaching Hospital, Benin City, Edo State  
Email: [ueasy2k2@yahoo.com](mailto:ueasy2k2@yahoo.com)*

*Eustace E. Oseghale*  
<https://orcid.org/0000-0001-5867-062X>  
*Emmanuel Okoeguale*  
<https://orcid.org/0000-0002-2241-9027>

## **ABSTRACT**

### **Background**

Foreign body impaction in the throat is a common presentation in the Ear, Nose and Throat emergency room and may be associated with dire consequences.

### **Case Report**

A nineteen-month old female was rushed to the Accident and Emergency Unit, University of Benin Teaching Hospital (UBTH), Benin City with a history of foreign body in the throat of three hours duration. Examination revealed a broken toothbrush impacted in the posterior oropharyngeal wall. She had impacted foreign body removed under local anaesthesia.

### **Conclusion**

Foreign bodies in the throat can be fatal if not promptly managed. Impacted toothbrush in the throat could be life-threatening due to respiratory embarrassment. Therefore, a good tooth brush should be used, caution should be taken while brushing and toddlers should have their teeth brushed by adults.

**Keywords:** Foreign body, throat, toothbrush, oropharynx, impaction.

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## INTRODUCTION

A foreign body is an item that is lodged inside or ingested in the body that is not natural.<sup>1</sup> An estimated 1500 to 1600 patients die in the United States each year as a result of complications related to the ingestion or insertion of foreign bodies into the Gastrointestinal tract.<sup>2</sup> Foreign body in the throat is an otorhinolaryngological emergency as they are associated with serious complications, such as acute upper airway obstruction, oropharyngeal laceration, deep neck space infection and sepsis. Its impaction in the ear, nose and throat is more common in children younger than 6 years.<sup>3</sup> And children are not likely to inform their parents or caregivers of the presence of foreign bodies, so are more at risk of complications.<sup>4</sup>

These days when both parents are employed to work outside the home, many children are left unguided increasing the chances of children putting foreign bodies in their orifices. The impacted toothbrush can penetrate the posterior oropharynx and this may present with airway compromise or extensive neurovascular injury.<sup>5</sup>

The index case highlights the potential danger involved when a toddler is allowed to brush unsupervised.

## CASE REPORT

A nineteen-month-old female was presented to UBTH Accident and Emergency with a history of foreign body in the throat of three hours duration. History obtained from the father revealed that the girl was brushing her teeth and playing, when the toothbrush got broken and part of it was impacted in the throat, her father brought out the other half from her oral cavity.

On examination at the accident and emergency room, she was noticed to be dyspnoeic with a respiratory rate of 44 cycles per minute, afebrile, not pale and anicteric. Intraoral examination revealed bleeding from the oral cavity and throat examination with a headlight and active suctioning revealed active bleeding in the oropharynx with blood clots covering a broken toothbrush impacted in the posterior wall of the oropharynx.

After thorough suctioning of the oral cavity and oropharynx of blood and blood clots, local anaesthetic spray was administered. She was restrained and had impacted toothbrush removed with a Magil's forceps. A small laceration and some bruises were noted on the posterior oropharyngeal wall. Pressure from adrenaline soaked gauze was used to secure hemostasis on the posterior oropharyngeal wall.

She subsequently had a stat dose of intravenous hydrocortisone and intravenous amoxicillin, intramuscular paracetamol and diclofenac. She was subsequently discharged home after 6 hours of observation on syrup amoxicillin, vitamin C and Ibuprofen.

Patient did not present for follow-up. However, her parents said she was alright when they were reached on phone

**Figure 1: Image of the impacted tooth brush**



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## DISCUSSION

Foreign body in the throat can present with severe complications and it is also the most challenging region in the ENT to manage foreign body impaction. Impacted toothbrush in the oropharynx has been reported severally. Sasaki T. et al,<sup>5</sup> reported a life-threatening penetrating oropharyngeal trauma in a ten-year-old girl with a snapped toothbrush in which the head lodged in the upper oropharyngeal wall. Gupta B and his team of researchers<sup>6</sup> reported an impacted toothbrush in the oropharynx of a ten years old boy with laceration of the tongue and hard palate.

Saileswar G. and Choitali G.<sup>7</sup> reported a case of a 16-month toddler who fell while brushing his teeth and had his toothbrush broken and impacted in his throat. The toothbrush was eventually lodged at the retropharyngeal space after the mother made attempts to remove it. Ebenezer J. and co-scientists<sup>8</sup> of Christian Medical College, Vellore, India, reported an impacted toothbrush in the buccal mucosa of a boy that required surgical removal.<sup>8</sup>

Management and complications of toothbrush impactions could vary with some patients having to undergo general anaesthesia. The index patient did not have general anaesthesia as impacted broken toothbrush was easily visualized after thorough suctioning of the oropharynx and foreign body was

removed under local anaesthesia in the emergency room. This greatly reduced hospital stay and morbidity. The ease of management of this patient was possible because of the early presentation in a specialist center with ear, nose and throat surgeons. Also, the patient did not attempt manipulation before presentation. There have been a lot of case reports on broken toothbrush in the throat with their associated complication and management challenges.<sup>5-9</sup> Toddlers should not be allowed to brush their teeth. It is advisable for parents or adults to brush the teeth of toddlers cautiously with the use of good children's tooth brush.

#### CONCLUSION

The index case was a nineteen-month old female who had a broken toothbrush impacted in her posterior oropharyngeal wall. She had the foreign body removed successfully. Parents or adults should brush the teeth of toddlers with caution in order to prevent toothbrush impaction and its associated complications.

#### Limitations

Photographs at the impaction site could not be taken because of the emergency nature of the case and profuse bleeding at the site of impaction.

#### Source of Support

Nil.

#### Conflict of interest

None declared

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