

A transethmoid transorbital foreign body

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Abstract

A case of an unusual foreign body, the bristle end of a broken toothbrush which was removed for the ethmoid sinus complex is presented.

Key words: Foreign body; Orbit; Paranasal sinuses

Introduction

A foreign body within the ethmoid sinus is a rarity. Most foreign bodies seen within sinuses are projectiles. Here we report a case of a rare foreign body i.e. the bristle end of a broken toothbrush, in a rare site – the ethmoid sinus complex.

Case report

A 30-year-old lady, presented four hours after a fist blow to the right eye, following which she was unable to open her eyes. On forcibly opening the eyelids, vision was seen to be normal bilaterally.

Closer examination revealed a penetrating wound on the right lower lid, medially through which a small bluish chip of glass or plastic was removed. Both the eyelids of the right eye were oedematous and proptosis of the left eyeball was evident. Anterior and posterior rhinoscopy were normal. Skull X-rays showed a foreign body lying across the ethmoid sinuses extending into the orbits (Figure 1). CT scanning of the orbits and paranasal sinuses revealed a single foreign body lying across both the ethmoid sinuses tenting the left optic nerve (Figure 2).

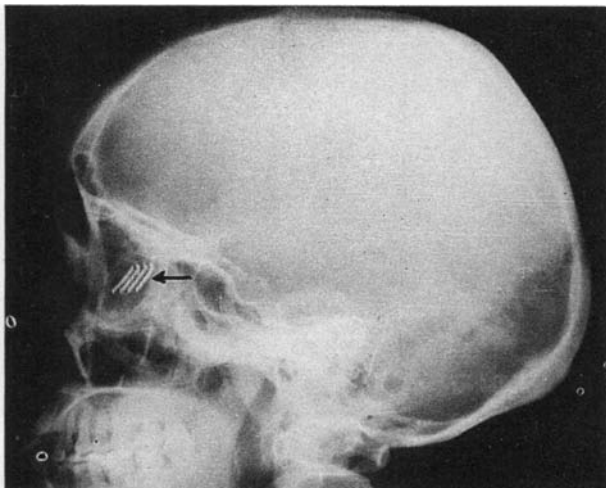


FIG. 1

Lateral X-ray of skull: bristles of toothbrush can be seen as four parallel rows lying within the sinus (arrowed).



FIG. 2

CT scan of the orbits and paranasal sinuses: the foreign body can be seen tenting the left optic nerve (arrowed).

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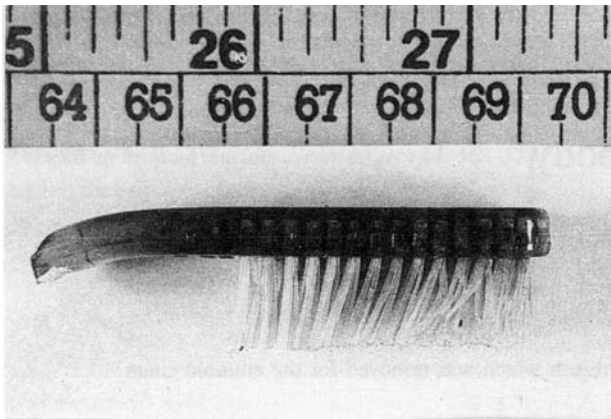


FIG. 3

The foreign body: bristle end of toothbrush after removal.

cer that his toothbrush had broken during the attack. On radiology, the bristle end of the toothbrush cast a very peculiar shadow, unlike any other foreign body, hence identification was difficult. How the toothbrush entered the ethmoid and got lodged in the opposite orbit, is difficult to understand because there was only a small wound on the right lower lid. It possibly entered through the punctured wound on the right lower eyelid and due to the sheer impact of the force behind it, it traversed medially and superiorly through the medial orbital wall, right and left ethmoids and into the left orbit, just about scraping the optic nerve. It was very important while removing it that no forward jerk was given to the foreign body.

We scanned the literature for reports of ocular and ethmoidal foreign bodies, and could not find any mention of such a bizarre foreign body. Reports have been made of orbitocranial foreign

bodies (Maere, 1979; Danneberg, 1992) where wooden/metallic foreign bodies have entered through the orbit and gone through the roof intracranially. Most of the patients lost their vision or had impaired vision. Penetrating eye injuries have been reported in another study (Specht, 1992).

All of these, like our case were assault related. Most of the patients were male and ocular injury when present was part of a multiple trauma. The objects used for assault ranged from firearms to metal rods, glass and scissors. Assault by toothbrush has not been reported previously. In most of these injuries, initial visual acuity after injury was impaired, but in our case, the patient had no visual impairment. No other report of a foreign body going through both the ethmoids and both the orbits could be found. Our patient surprisingly had no nasal complaints and miraculously, the recovery was total with no visual impairment.

This case makes one believe in the 'Hand of God'! or a 'brush with fate?'.

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