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Case Report

Button battery: a case of neglected foreign body nose

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ABSTRACT

Button batteries are amongst the most dangerous foreign bodies which can accidentally be put by the child in their nostril and causes extensive tissue damage. The longer the foreign body is lodged in the nostril the more is the damage which can occur. Such foreign bodies in the nose may immediately be reported or sometimes may be reported later on with complains of unilateral foul-smelling rhinorrhoea. Whatever, may be the case the button battery needs to be immediately removed. In addition to removing the foreign body ENT surgeon needs to manage complications such as necrosis of septum, septal perforation etc. We are reporting a case of button battery in a 5-year-old child which was inserted in the left nostril one and half months back. Patient was posted in OT and button battery removed under general anaesthesia. Complication such as necrosed septum, granulations and septal perforation were noted on nasal endoscopy and were managed conservatively.

Keywords: Button battery, Neglected, Foreign, Body

INTRODUCTION

Foreign bodies in nose is a common ENT emergency. Children always have a curiosity and have tendency to put household objects in their nose. Foreign bodies may present immediately or they may be left behind for a long time and present with unilateral foul-smelling purulent rhinorrhoea. Button batteries are part of childhood toys and children accidentantly put it in their nose. They are dangerous foreign bodies and cause corrosive injury. They cause extensive tissue damage by physical and chemical burns. The clinical course of a child with a button battery depends on several factors including the location, duration of mucosal exposure, remaining voltage in the battery, its age (new or old) and chemical composition of the battery.[1,2] Button battery foreign bodies in the nose, gastrointestinal tract and ear pose a hazard to the patient and demand immediate medical attention.[3,4]

We are reporting a 5-year-old child with a foreign body in nose since one and half months which was removed under endoscopic visualization.

CASE REPORT

A 5-year-old child was brought to ENT OPD with history of foul-smelling rhinorrhoea from left nostril since one and half months. On anterior rhinosocopy blackish purulent secretions were present. X ray nose and PNS showed a circular radiopaque foreign body on left nostril (Figure 1). Patient was posted in OT suctioning of secretions done, foreign body was visualized and removed by probe under general anaesthesia (Figure 2). Diagnostic nasal Endoscopy was done which revealed granulations,necrosed areas of septum, septal perforation. A small antibiotic ointment-soaked pack was placed which was removed later on. Conservative management was followed for managing septal perforation with antibiotics, saline nasal drops and advising nasal

douching. Follow up of the patient was done at regular intervals.

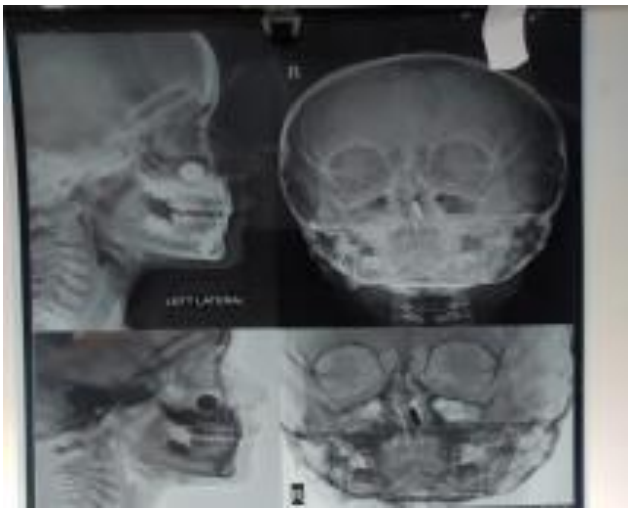

Figure 1: X-ray nose and PNS showing foreign body left nostril.

Figure 2: Button battery after removal.

DISCUSSION

Nasal foreign bodies generally manifest either after the patient is observed to insert the object/ battery into the nose or more commonly, when a child is brought for evaluation of a unilateral, purulent rhinorrhoea.

The various mechanisms of injury by these batteries to the mucosa have been proposed by Litovitz.[5] 1. Spontaneous electrolyte leakage, with liquefaction necrosis and cumulative tissue damage. 2. Corrosive effects of mercury oxide after leakage. 3. Pressure necrosis from the impacted foreign body. 4. The generation of an electric current causing electric burn. In the presence of an electrolyte solution, the current produces chlorine gas and sodium hydroxide resulting in the formation of precipitate.

The clinical presentation can be unilateral nasal discharge with or without features of secondary infection. The earlier the foreign body is removed, the lesser is the morbidity. The longer it stays in the nose, the more likely it results in necrosis of nasal mucosa, scarring, septal perforation, nasal synichae and nasal cavity stenosis. Nasal button battery impaction may produce mucosal and septal ulceration, chondritis, atrophic rhinitis, saddle nose deformities and alar collapse may result ultimately.[6]

The management comprises of anterior rhinoscopy, radiographic assessment and nasal endoscopic evaluation with rigid endoscopes for safest removal of nasal foreign bodies with minimal mucosal trauma with or without anesthesia.

In our case the button battery was successfully removed under general anaesthesia under endoscopic guidance. Complication such as septal perforation was managed conservatively.

CONCLUSION

This case teaches the otorhinolaryngology community about the difference and the challenges in removing a dangerous neglected foreign body nostril like button battery as compared to a simple foreign body immediately reported after insertion in nostril.

Such cases need to be posted in OT under general anaesthesia so that under proper visualization and endoscopic guidance foreign body is easily removed and complications such as septal perforation, necrosis and granulations are noted.

In such cases ENT doctor needs to counsel the parents before foreign body removal and make them aware about possible complications which might be discovered after foreign body removal.

ENT doctor needs to be prepared to manage the complications to the best of his/her ability after taking the child's age, clinical expertise of the ENT team and the infrastructure of the hospital, consent and socioeconomic status of the parents etc.

Follow up is important after discharging the patient from the hospital.

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