

Broken Pen Tip in the Nose Following Stab Injury

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Abstract

Foreign bodies are common to occur in the nose of children, but it is uncommon to be because of stabbing by open in the face. This paper will report a case of stabbing a child in the face that penetrate the maxillary sinus and nasal septum to the opposite side of the nose, where the pen tip is retained. Radiography was done to check the location of the pen tip, which was removed by otorhinolaryngologist using Luc's nasal Forceps via anterior Rhinoscopy technique. Follow up to the nasal septum and infraorbital wound was done.

Keywords: *Pen Tip; Nasal Septum; Stab Injury*

Introduction

The majority of penetrating injuries to the head and neck occur as a result of stab injuries or road traffic accidents. NFBs (Nasal Foreign Bodies) are quite common among pediatric patients [1]. Sharp foreign bodies pose a greater problem as they can pierce the soft tissues of the nose and pharynx and lead to further complications.

The development of Rhinoscopy confers on the otorhinolaryngologist the ability to visualize the nose and the other intranasal structures and to perform surgical procedures in the region as and when the need arises [2]. This paper reports a case of stab injury in a fourteen year old child in the right infraorbital region caused by a pen which resulted in the metal tip getting embedded in the left nasal wall. The striking feature in the present case was that the pointed metal tip of the pen and the lining of the nasal bone by mucoperiosteum resulted in injury to the nasal septum.

Case Report

A 14 year old male patient reported to the maxillofacial department of Princess Basma Teaching Hospital with a chief complaint of a wound and pain on the right side of his face. On eliciting the history of presenting illness the child revealed that his colleague at school had stabbed the right side of his face with the pen. Associated moderate pain was present (Figure 1). The child was accompanied by his teacher and did not report any loss of consciousness following the incident. On general examination the child was oriented and vital signs were within normal limits. Extra oral examination revealed a hole of 4 mm radius in the right infraorbital region a few millimeters lateral and inferior to the infraorbital foramen with no bleeding and mild edema. Intraoral examination could not reveal the extent of the extension of the pen. Hence lateral skull and posterior-anterior skull radiographic procedures were carried out to confirm the extension precisely.



Figure 1: Extra-oral clinical appearance showing the pen penetrating the face.

The radiographs revealed that the metal tip of the pen was trapped in the left lateral wall of the nose as highlighted by the radiopacity within the nasal fossa. Perforation of the nasal septum could also be made out on the radiographs (Figure 2 and 3). However the adjacent structures namely maxillary sinus, infraorbital margin, mandible and teeth were unaffected. The patient was referred to an otorhinolaryngologist. Under general anesthesia with the placement of oral intubation and pharyngeal pack to protect the airway copious washing of the wound in the lateral nasal wall region was carried out using normal saline after opening the nostril with the aid of nasal speculum. Subsequent to this procedure the pen tip became visible which was then gripped by Luc's nasal forceps and extirpated. The wound was small and therefore it did not necessitate suturing. A prescription of Antibiotics including amoxicillin and metronidazole along with analgesics was prescribed to the patient for one week and the child was advised not to blow his nose. The perforation in the nasal septum was placed under observation on the otorhinolaryngologist's advice. The follow up appointment after one week showed satisfactory evidence of healing. The nasal septum showed improvement in its condition therefore no further intervention was indicated.



Figure 2: Lateral radiograph showing the tip of the pen in the nasal area.



Figure 3: Posterior-anterior radiograph showing the tip of the pen penetrating the nasal wall.

Discussion

Stabbing of the head and neck region with a knife or any other sharp object is not uncommon, but stabbing of the head and neck with a pen is quite a rare condition. Very common penetrating injuries that lead to the impaction of part of the foreign bodies are still a very fearful situation for the patient or the guardians. They usually occur after a gunshot or stab wound [3]. The same situation was experienced by our patient and the accompanying teacher who were quite apprehensive regarding the injury as well as the consequences of the same. Early treatment resulted in avoidance of occurrence of complications such as an infection. Occurrence of infection due to delayed intervention has been reported by Datarkar, *et al.* in which case infection and subsequent pus discharge was reported due to the primary treatment being non-comprehensive. Surgical intervention after a prolonged duration post trauma would also be difficult [4].

Although the pen could have penetrated vital structures such as the right maxillary sinus and could have come very near to the neurovascular tissue of the infraorbital foramen, the child fortunately came without active bleeding in this case. It is not surprising that the pen could penetrate the nasal fossa because of the lining of the bone by mucoperiosteum.

Nasal septal injury may result in abscess formation which will necessitate another surgical intervention because of the possibility of septal deformity or nasal obstruction however such complications were not noticed in the present case and the nasal septum injury showed evidence of healing in the follow-up appointment [5].

In some cases of pediatric trauma, various medical specialities are required to restore function and aesthetics. Aversana, *et al.* reported a case in which violence was caused by a pen similar to the present one and the pen cap penetrated the nasal bone. Swelling was also reported owing to inappropriate treatment. However the same was avoided in our case on account of timely and accurate intervention. Therefore this emphasizes the importance of accurate clinical diagnosis and radiographic examination in all such cases [6].

Disclosure

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