CASE REPORT

Traumatic Impaction of Unusual Foreign Body in a 10-year-old Boy's Mouth: A Case Report

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ABSTRACT

Placing objects in the mouth by children get accidentally implanted in the oral cavity, ingested, or aspirated. The incidence of foreign bodies is usually higher in the zone of head and neck than other regions of the human body. Usually, foreign bodies are symptomatic and signs of inflammation pain and purulent discharge are shown. This paper describes an unusual case of traumatic foreign body (pen cover) accidentally moved in the retromolar area causing recurrent facial swelling, purulent discharge, and reduced mouth opening.

Keywords: Iatrogenic foreign body, Oral cavity, Traumatic foreign body.

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INTRODUCTION

There are many reasons by which foreign bodies can be ingested, inserted into a body cavity, or deposited into the body by traumatic or iatrogenic injury. Common causes for traumatic foreign bodies can be motor vehicle accidents, assaults, and bullet wounds.¹ The size and the type of object, anatomical relationship of the foreign body to vital structures, and difficult access toward it are the challenges for the surgeon to deal with.² Metallic objects³ and restorative materials such as amalgam, wooden stick,⁴ broken instruments, obturation materials, and needles are considered as foreign bodies.⁵ These cases are often diagnosed accidentally on radiographic examination⁶ or pain and signs of inflammation with purulent discharge are associated with it.⁷ Due to this, it is necessary to identify and remove it from the tissue.⁸

Proper diagnosis should be done to find the exact location of foreign bodies before its removal, and for this, proper investigation should be done. Depending on the composition and exact location of the foreign body, computed tomography (CT) scans, plain radiographs, ultrasound, and magnetic resonance imaging (MRI) can be done.^{9,10} Due to the migration risk to adjacent areas, these should be immediately done at the time of surgery.^{11,12}

This paper describes a case of facial trauma by a blunt object (pen cover) accidentally moved in the retromolar area causing recurrent facial swelling, purulent discharge, and reduced mouth opening.

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CASE DESCRIPTION

A 10-year-old boy was referred to us with the complaint of recurrent swelling on the left side of the face along with purulent discharge and reduced mouth opening since 3 months (Fig. 1). The swelling got relieved on taking antibiotics and anti-inflammatory medicines but reoccurred again. There was no relevant past medical history.

Figs 1A and B: (A) Facial swelling on the left side of the face; (B) Reduced mouth opening

No history of trauma was prevailed. On clinical examination, we could only acknowledge the mobility of second primary molar which was about to exfoliate as mouth opening was reduced. There was no sign of caries on the first permanent molar. Nothing was acquired from oral examination, so orthopantomogram (OPG) was advised.

OPG revealed no signs of carious exposure, impacted teeth, or cyst/tumor in that area (Fig. 2); therefore, ruling out to be hard/bony

Fig. 2: Orthopantomogram showing no signs of carious exposure

tissue pathology, soft tissue pathology was presumed. Then, the patient was advised for MRI. Magnetic resonance imaging revealed a strange foreign body which was cylindrical in appearance situated near the retromolar area (Fig. 3).

Due to lack of compliance and reduced mouth opening, it was planned to remove the foreign object under general anesthesia set-up. In the procedure, a vestibular incision is given from the region of first permanent molar to the anterior border of ramus. Mucoperiosteal flap is raised and blinded, but careful dissection is done in the region of pterygomandibular space so as to avoid any unintentional injuries (Figs 4 to 6).

We startled as we felt a hard structure, which was carefully separated from the adjacent vital structures such as inferior alveolar nerve and vessels, lingual nerve, and vessels. After elevation with the help of Ellis tissue-holding forceps, a strange foreign body was taken out which was found to be a cap of a plastic ball pen (Figs 7 to 9). The wound was thoroughly irrigated with normal saline, and primary closure was done by 3.0 black silk (Fig. 10). Routine medications and postoperative instructions were given.

Reduced mouth opening was completely resolved in 7 days (Fig. 11). There was complete recovery without any medication after 5 days. Oral hygiene instructions were given.

Further, when the patient was enquired regarding the foreign body, he had a faint memory of fight among the classmates around

Figs 3A and B: Magnetic resonance imaging showing the presence of a strange foreign body

Fig. 4: No sign of intraoral inflammation

Fig. 5: Incision given and mucoperiosteal flap elevated

Fig. 6: Blind dissection

Fig. 7: Emergence of foreign body

Fig. 8: Careful elevation of foreign body

Fig. 9: Foreign body "cover of plastic ball pen" with granulation tissue

Fig. 10: Cleaning and irrigation of wound

Fig. 11: Immediate mouth opening after 7 days

3.5 months back. He had slight bleeding at that time which stopped there and then only with not much pain. The child because of fear did not tell anything to anyone.

Surprisingly, the child himself did not realize that something had gone inside the wound after that fight. Later, after 20 days, swelling and reduced mouth opening happened. The child could

not relate his extra oral swelling with that incident. Therefore, due to lack of right investigation, the situation worsened leading to scarring and fibrosis of the tissues.

DISCUSSION

Either by traumatic injury or iatrogenically, foreign bodies may get deposited in the oral cavity which can be due to motor vehicle accidents, bullet wounds, and glass pieces. These are the most frequently reported traumatic foreign bodies.¹³

Clinically, these impacted foreign bodies are difficult to detect; hence, they pose a diagnostic challenge. Depending on foreign bodies' inherent radio density and proximity with the tissue in which they are embedded, they may be visualized on plain radiographs based on their ability to attenuate rays.¹⁴ Metallic objects are opaque on radiographs, unless made of aluminum. Foreign bodies such as stones, displaced pieces of teeth, various metals, and glass can be revealed on plain radiograph and CT. In our case report, the foreign body (pen cover) was visible in cylindrical shape through MRI and was radio-opaque.

Removal of these foreign bodies is mandatory even if the patient is asymptomatic, as these objects usually lead to secondary infection, with abscess and fistula formation.¹⁵ The composition and location of the foreign bodies can vary considerably as superficial and penetrating foreign bodies depending on the type of trauma. Usually easy to remove if seen are the superficial bodies and those which are more difficult to remove are penetrating foreign bodies.¹⁶ To determine whether the foreign body is near vital structures or not is necessary. In most of the cases, patients possessed with oral pain and signs of inflammation with purulent discharge. Rarely in the dental literature, there are reports of asymptomatic foreign bodies.^{12,17} In this case report, the foreign body was penetrating and was presented near the retromolar area.

Due to a misdiagnosis or the absence of symptoms, the prompt removal of foreign bodies from the body may not occur.¹⁸ The patient sought treatment only when he suffered from pain, swelling, purulent discharge, and limitation of mouth opening, i.e., when situation worsened.

CONCLUSION

Primary complaint of the patient was recurrent facial swelling, and on routine intraoral examination, a neglected, asymptomatic foreign body was revealed after 3 months. This case report emphasizes that to avoid local and systemic complications due to the foreign body, it is important to take thorough and systematic dental examination. On trismus (reduced mouth opening) complaint cases, it should be included in the differential diagnosis, especially in patients with recent past history of trauma.

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