

Intra-Oral traumatic implantation: A case report

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Summary

A case of traumatic implantation of a broken piece of a ball point pen in the pterygomandibular region in a 13-year-old male patient is presented. Removal of the pen shaft was done by blunt dissection and careful manipulation under local anaesthesia. The possible complications of similar cases are enumerated.

Keywords: Trauma, Implantation, Oral cavity, Foreign body.

Résumé

Il s'agit d'un cas d'implantation traumatique d'un fragment d'un stylo à bille cassé dans la région ptérygomandibulaire d'un patient âgé de 13 ans. Enlèvement de la tige du stylo était opéré à travers la dissection émoussée et une manipulation attentive sous l'anesthésie locorégionale. On avait également analyser des complication éventuelle des cas pareils.

Introduction

Even though penetrating facial trauma is uncommon in children¹, impalement injuries and implantation of foreign bodies in the oral cavity appear to be more common in younger children². The incidence of penetrating intra-oral trauma in children may be unknown as many are left to heal without seeking consultation³. However, a lot of these injuries have been reported mainly in children under the age of 4 years⁴. Typically, the child falls with the foreign body in the mouth resulting in implantation at various sites commonly of which are the buccal mucosa and the hard and soft palate^{5,6,7,8}. Occasionally, the foreign body may penetrate vulnerable structures leading to serious morbidity and mortality⁹, but more often injuries are minor. Problems may however occur if the impacted object breaks and becomes embedded in the tissues resulting in a foreign body reaction. In this communication, we are presenting an unusual case of traumatic implantation of a broken piece of a ball point pen in the pterygomandibular space of a 13-year-old boy.

Case report

A thirteen-year-old boy presented to the Paedodontic Unit of the Dental Centre, University College Hospital, Ibadan with a three-month history of implantation of a broken piece of a plastic ball point pen in the oral cavity secondary to a blow. The patient stated that he was accidentally hit in the mouth by a classmate while the pen was in his mouth. The pen broke following this impact and there was bleeding at the site. He was immediately taken to a private medical clinic where he was examined and placed on a regimen of antibiotics, analgesics and tetanus toxoid. However, a remnant of the broken end of the pen buried in the pterygomandibular space was not detected. There was trismus and associated dysphagia.

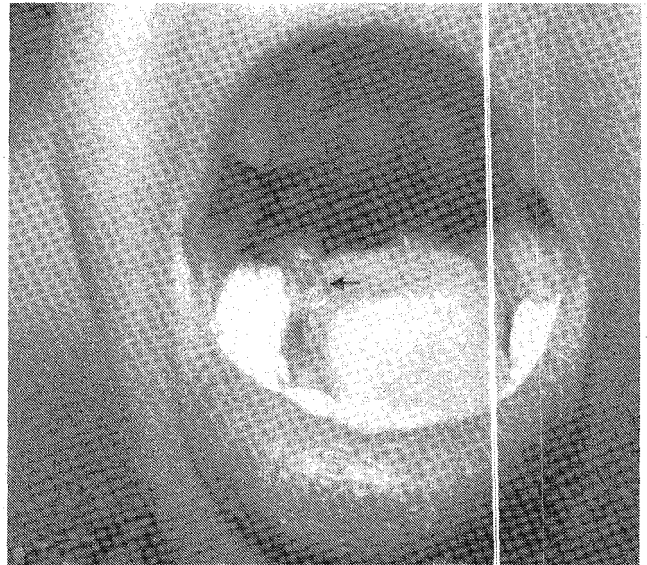


Fig. 1 Broken end of shaft of the ball point pen extruding from the right pterygomandibular space.

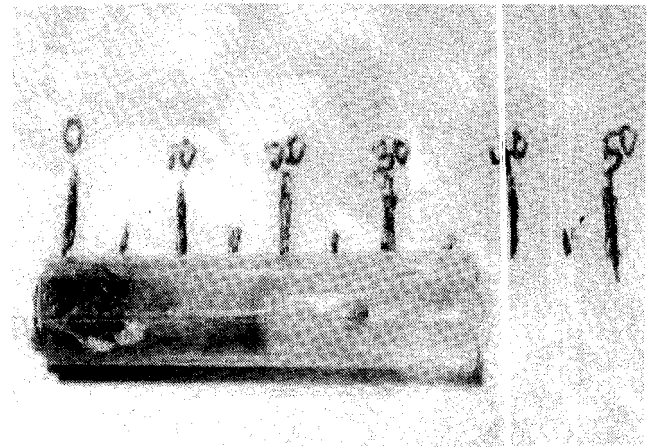


Fig. 2 Removed remnant of broken shaft of ball point pen.

Extra-oral examination revealed a healthy looking boy with no facial swelling. There was absence of sub-mandibular lymphadenitis. Intra-orally, a slight degree of trismus was present. The inter-incisal distance was 2.8cm and there was slight left deviation of the mandible on opening. A pen shaft which measured 15mm was seen extruding from the right pterygomandibular fossa (Fig.1). Chronic granulomatous tissue and erythema were seen in the site and the right distal margin of the tongue. A periapical radiograph revealed a hazy radiopacity of the pen shaft above the region of the unerupted lower right third molar.

Treatment

Removal of the foreign body was done under local anaesthesia using infiltration with 2% lignocaine + 1:80,000

adrenaline. A straight incision was made on the overlying soft tissue and by blunt dissection the foreign body which measured 35mm was manipulated out of the tissue (Fig 2). Haemostasis was achieved with a pressure pack and the wound was left to heal by secondary intention. The patient was discharged home and placed on a 5-day regimen of Ampicillin capsules 250mg qds and Metronidazole tablets 200mg tds. A 3-day course of Paracetamol tablets 1,000mg tds was also given. The patient was placed on warm saline mouth rinse 6 times daily for a week. Initially, the patient was reviewed 24 hours post operatively and subsequently at weekly intervals for a month. The healing was uneventful.

Discussion

The most common injuries to the upper aerodigestive tract in children are those that occur from foreign objects placed in the mouth¹⁰. This is a result of accidents while hard pointed objects are held in the mouth. These commonly happens when young children run around with toys, sticks, pencils and similar objects in the oral cavity¹⁰. Danger occurs when they fall or collide with stationary objects such as doors or walls and in other instances, they are hit accidentally by friends during play. The puncture wound seldom bleeds profusely and the tissues usually collapse and obliterate the defect when the penetrating object is withdrawn.

However, it is pertinent to ensure that no part of the foreign body is left in the wound. It is important that measures to prevent infection are the only intervention instituted and suturing is usually contraindicated because the procedure favours the growth of anaerobic pathogenic bacteria which may have been implanted. The patient should be observed closely in case of development of any swelling which may lead to respiratory embarrassment. The wound should be allowed to heal by granulation¹¹. The treatment regimen should include tetanus toxoid as penetrating wounds can be dangerous and carry tetanus infection deep into the tissues.

Reports of penetrating injuries in the oral cavity have revealed that they may lead to increased morbidity and mortality in the paediatric population. Cases have been documented in which minor lacerations to the soft palate and anterior faucial pillars have led to penetration through the mucosa, compromising deeper tissues and progressing to retropharyngeal abscess and mediastinal emphysema^{11,12}. Other reports of penetrating pharyngeal injury revealed that the internal carotid artery was traumatized resulting in thrombosis, hemiplegia and death¹³.

At times detection of soft tissue foreign bodies may be difficult even when strongly suggested by history and physical examination thus presenting a diagnostic challenge even to the experienced clinician. Great difficulty would have been encountered in detecting the pen shaft using plain radiographs because of the plastic nature, which will appear radiolucent or just slightly radiopaque. Retained wooden objects in facial tissues have similarly posed considerable diagnostic difficulties^{14,15}.

In conclusion, undetected foreign bodies can cause significant morbidity.

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