



Original Research Article

Unusual Orofacial Foreign Body: Self-Inflicted Pen Nib Entrapment in the Upper Lip – A Case Report

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Abstract:

Foreign body entrapment in the oral and maxillofacial region is uncommon and is usually associated with trauma, violence, or iatrogenic causes. Reported foreign bodies include wood, metal fragments, dental materials, and tooth components; however, penetration by unconventional objects due to unintentional self-inflicted injury is exceedingly rare. This report describes an unusual case of a retained ballpoint pen nib embedded within the upper lip following accidental self-injury. Diagnostic considerations, surgical management, and clinical outcomes are discussed, emphasizing the importance of detailed history-taking, careful examination, and appropriate imaging to avoid delayed diagnosis and complications. This case highlights the relevance of SDG 3 (Good Health and Well-Being) through safe and timely care, SDG 4 (Quality Education) via clinician awareness of atypical presentations, and SDG 17 (Partnerships for the Goals) by advocating interdisciplinary collaboration in orofacial trauma management.

Keywords: Foreign body; Upper lip injury; Orofacial trauma, pen nib, radiovisiography, SDG 3,4,17.

INTRODUCTION

Penetrating foreign bodies within the oral and maxillofacial region are uncommon and are most frequently associated with motor vehicle accidents, falls, interpersonal violence, therapeutic procedures, or iatrogenic causes. ^{1, 2} Self-inflicted injuries resulting

in the lodgement of foreign bodies in the maxillofacial tissues are particularly rare. Orofacial injuries involving the oral cavity, eyes, nose, and facial structures are more commonly reported in children, often occurring following accidental falls while holding objects such as pencils. ³ In certain cases,

retained foreign bodies may migrate within soft tissues and remain asymptomatic for prolonged periods before presenting clinically.^{1,3} The biological behaviour of a penetrating foreign body is largely influenced by its material composition. Inert materials such as glass or stainless steel may elicit minimal inflammatory response and, in selected cases, may not necessitate removal.³ In contrast, organic foreign bodies are prone to secondary infection and typically require prompt retrieval to prevent complications such as abscess formation or fistulae. The optimal radiographic modality for the detection and localisation of foreign bodies in the maxillofacial region remains a subject of clinical debate. Imaging options include conventional plain radiography, computed tomography (CT), and magnetic resonance imaging (MRI), each with distinct advantages and limitations depending on the size, composition, and location of the foreign material. When combined with a detailed history of the injury, appropriate imaging selection enables accurate diagnosis and facilitates complete retrieval of retained foreign bodies, thereby minimising the risk of missed fragments and subsequent complications.^{4,5} This case report presents the unusual retention of a ballpoint pen nib within the upper lip for a period of three months following unintentional self-inflicted injury. The diagnostic work-up, imaging considerations, and surgical management are described, highlighting key clinical principles for the identification and complete retrieval of atypical foreign bodies in the orofacial region.

CASE REPORT

A 19-year-old male presented to the Oral and Maxillofacial Surgery outpatient department with pain and swelling of the upper lip. The patient reported a two-week history of pain associated with a persistent swelling that had been present for approximately three months. He had previously sought dental consultation at a local clinic for the same complaint and was managed conservatively with medication, which resulted in symptomatic pain relief; however, the swelling remained unchanged. Clinical examination revealed a well-defined, non-fluctuant swelling measuring approximately 1 × 1 cm located in the midline of the upper lip, with no associated discharge. The lesion was tender on palpation and firm in consistency. (**Fig. 1**).

Based on the clinical presentation, a provisional diagnosis of an infected mucocoele was considered. Radiographic evaluation using radiovisiography (RVG) of the affected area revealed a well-defined, bullet-shaped radiopaque foreign body embedded within the upper lip, suggestive of a metallic object (Fig. 2). Following review of the radiograph, the patient recalled a history of unintentional trauma approximately three months earlier, during which he sustained a blow to the back of his head while holding a ballpoint pen in his mouth. He did not recognise penetration or retention of the pen nib at the time of injury. Routine haematological

investigations were within normal limits, and the patient was subsequently scheduled for surgical retrieval of the foreign body under local anaesthesia.

Local anaesthesia was achieved by infiltration of 2% lignocaine with adrenaline (1:100,000) around the lesion. A crescent-shaped incision was placed over the swelling, followed by careful submucosal dissection using a haemostat. The foreign body was identified and retrieved in toto (Fig. 3). The surgical field was thoroughly irrigated with copious saline and povidone-iodine solution, and primary wound closure was performed using 3-0 black silk sutures. Postoperatively, the patient was prescribed oral amoxicillin 500 mg and ibuprofen 400 mg three times daily for three days and advised to return after one week for review.



Fig 1: showing swelling in the upper lip

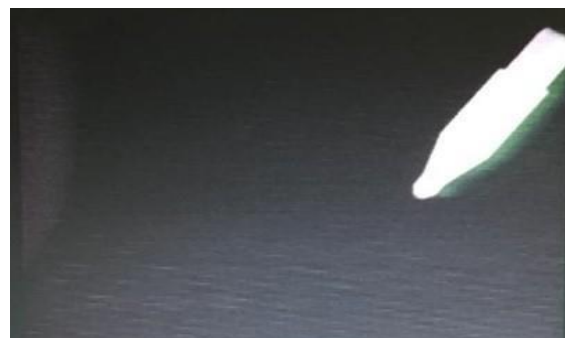


fig2: showing ball point pen nib in RVG



fig3: showing surgical removal of foreign body from the upper lip.

DISCUSSION

Retention of foreign bodies such as dental materials, wood, metallic fragments, gun pellets, pencil tips, and tooth or root fragments within the orofacial region has been well documented in the literature.^{1,2} However, penetration and retention of a ballpoint pen nib in the orofacial tissues is exceedingly rare, with very few reports available. Self-inflicted injuries involving the orofacial structures are themselves uncommon and may occur accidentally, be premeditated, or arise from unusual habits. Such injuries are often caused by foreign objects or, less frequently, by fingernails, and may result in trauma to the lips, gingiva, or teeth.⁶ In the present case, an accidental self-inflicted injury led to the penetration of a metallic pen nib into the upper lip, which remained undetected for approximately three months due to the patient's lack of awareness of foreign body entrapment. The delayed presentation underscores the diagnostic challenge posed by atypical mechanisms of injury and highlights the importance of maintaining a high index of suspicion when evaluating persistent orofacial swellings.

The choice of imaging modality for foreign body evaluation depends on the nature of the injury, the anatomical site of entrapment, and the suspected composition of the object. While computed tomography (CT) is generally considered the imaging modality of choice for most orofacial foreign body injuries,^{2,4} conventional dental radiography can be effective for superficial or radiopaque objects. In the present case, a routine radiovisiograph (RVG) successfully identified the foreign body, revealing a bullet-shaped ballpoint pen nib lodged within the soft tissue of the upper lip. This highlights that, in select cases, simple, readily available imaging techniques may provide sufficient diagnostic information, facilitating timely intervention without the need for advanced imaging especially in remote areas. Foreign bodies within the facial region present a distinct challenge to the oral surgeon, requiring a comprehensive understanding of the mechanism and nature of injury, along with accurate radiographic interpretation to ensure complete removal and prevent potential complications.^{2,4} In this case, the patient was counselled regarding the retained foreign body using the RVG image for visualisation. Surgical retrieval of the pen nib from the submucosal layer of the upper lip was performed successfully under local anaesthesia, resulting in complete resolution of the swelling and pain. This case underscores the importance of thorough clinical evaluation, appropriate imaging, and timely surgical intervention in the management of atypical orofacial foreign bodies.

A comprehensive case history, meticulous clinical

examination, and appropriate radiological evaluation are essential to accurately determine the location, composition, and size of a foreign body, as well as to anticipate the complexity of its surgical retrieval. Such a structured approach facilitates timely and safe management, minimises the risk of residual fragments, and helps prevent long-term complications.

CONCLUSION

Self-inflicted injuries of the orofacial region may occur accidentally, as a result of uncommon habits, or premeditated acts. This case highlights an accidental self-inflicted injury leading to the retention of a ballpoint pen nib in the upper lip. Comprehensive case history taking, combined with accurate radiographic assessment, enabled precise surgical planning and successful retrieval of the foreign body. Beyond its clinical relevance, this report underscores the importance of SDG 3 (Good Health and Well-Being) by promoting patient safety and timely intervention, SDG 4 (Quality Education) through the reinforcement of clinician awareness regarding atypical injuries, and SDG 17 (Partnerships for the Goals) by emphasising interdisciplinary collaboration in the management of orofacial trauma.

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