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## Foreign body in the mandibular buccal sulcus: A case report

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### Abstract

Foreign bodies may enter the body either by the traumatic injury or accident such as battle fight road traffic accidents or iatrogenically. Proper case history, clinical and radiographic examination help us to conclude the size depth of penetration and the precise location of foreign body and are beneficial to plan its retrieval under local or general anesthesia. It is more common to find this situation in children as it is a well-known fact that children often tend to have the habit of placing foreign objects in the mouth. These foreign objects usually act as source of risk of infection and may later lead to a painful condition. This paper discusses the presence of unusual foreign bodies and brief about their management.

**Keywords:** Foreign body, metal, surgical removal of metal

### Introduction

Foreign body may be ingested, inserted into an oral cavity, or get deposited into the body by a traumatic or iatrogenic injury. Most foreign bodies causes abscess formation, septicemia, lead to severe hemorrhage or remain inert. Any inserted foreign bodies can also undergo distant embolization<sup>[1]</sup>. There can be many ways by which foreign body can enter body cavity like motor vehicle accidents, assaults, and bullet wounds<sup>[1]</sup>. Foreign bodies, and tissue reactions to any foreign materials, are commonly encountered in the oral cavity of human beings. Iatrogenic ways of ingestion of foreign bodies include apical deposition of endodontic materials (gutta percha), amalgam and graphite tattoos, oil granulomas, and traumatically introduced dental materials and accidental breakage of instruments<sup>[2]</sup>.

We are reporting a case of foreign body which was accidentally discovered during the routine radiographic examination of the oral cavity.

### Case report

A male patient, 50 years of age, reported to the department of oral and maxillofacial surgery with chief complaint of missing lower anterior teeth and occasional pain in lower anterior and chin region since 3 years. He had a history of road traffic accident approximately 5 years back in which his chin was injured. There was no history of any associated bone fracture. There were some soft tissue injuries which had been treated by a local physician by suturing of the wound without any radiographic examination. Since then he had been asymptomatic other than bouts of dull pain during mastication. On examination no scar was noticed on the chin region. There was no appreciable swelling seen in lower labial vestibule or chin region. On palpation he had pain intraorally in lower labial vestibule and extra orally in left side chin region near lower lip. A mobile hard mass was palpable lower labial vestibule. Overlying mucosa was normal with no signs of inflammation. Cervical lymph nodes were non palpable.

Orthopantomogram (OPG) (Figure 1) when done showed well defined radiopacity of size approx 0.5-0.6cm and irregular in shape was seen below the periapical region of left lower canine region. A provisional diagnosis of metallic foreign body embedded in soft tissue was made considering the relative radio-opacities of various foreign materials known to be lodged in soft tissue<sup>[3]</sup>. Also metallic foreign body was the suspected radiological diagnosis considering the density of the foreign body to be absolute<sup>[4]</sup>.

Under local anesthesia degloving incision was placed in the lower labial vestibule, near the left canine area. After incision, blunt dissection was performed using a curved hemostat to locate the foreign body which was then identified and excised.

Metal piece enclosed with granulation tissue was excised (Figure 2). After excision, debridement of the surrounding soft tissue was performed followed by irrigation with 20-30 ml of normal saline and cavity closure was done in layers using 6-0 vicryl suture. Postoperative radiograph revealed complete excision of the same. Postoperative healing was uneventful.

### Discussion

The visibility of different materials on plain radiographs depends on their ability to attenuate x-rays; foreign bodies may be visualized, depending on their inherent radiodensity and proximity with the tissue in which they are embedded.<sup>5</sup> Metallic objects, unless made of aluminum, are opaque on radiographs, as are most animal bones and all glass foreign bodies<sup>[1]</sup>. Thorns, splinters, wooden fragments and pieces of plastics are usually not opaque to be visualized. Any piece of glass 1-2 mm or larger should generally be visible in radiograph<sup>[1]</sup>.

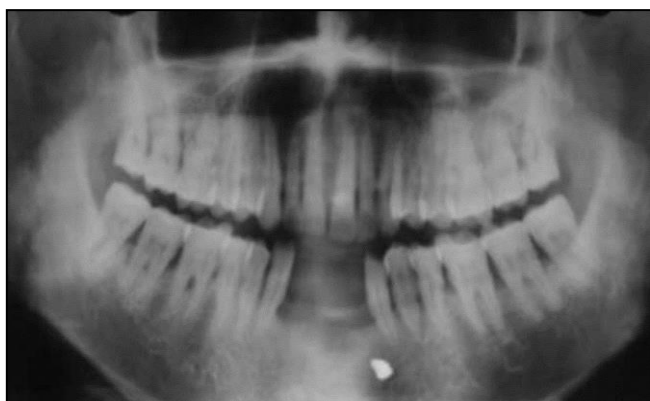
Whenever there is history of foreign body ingestion whether in adults or child, the patient should be examined with aid of chest x ray<sup>[1]</sup>. Usually, history taking reveals the nature of foreign body. In patients who have had a penetrating injury, the nature of foreign body determines the clinical behavior; inert objects such as steel and glass may not cause significant inflammation to warrant their removal<sup>[2]</sup>. Introduction of foreign body into the floor of the oral cavity may cause initial local pain, stay inert (asymptomatic), induce local abscess formation, fibrosis or spread down to produce deep neck space infection<sup>[6]</sup>.

Removal of organic foreign bodies is however mandatory, since these objects usually lead to secondary infection, with abscess and fistula formation<sup>[7]</sup>. There are case reports of granuloma formation and sarcoid like lesions in patients who have inhaled glass fibers<sup>[8]</sup>. The possibility of metal causing granulomatous reaction cannot be ruled out.

In the present case, foreign body was a piece of metal which had induced fibrosis, scarring and tenderness on palpation in left lower labial vestibule which was surgically removed under local anesthesia successfully.

### Conclusion

Otherwise asymptomatic foreign object embedded in the vestibule lead to fibrosis and may be responsible for causing the space infection at the later stage. But the diagnosis of such foreign body which may be present as disguise deeply embedded is usually accidental finding in most of cases. Removal of such small foreign bodies can be attempted successfully under local anesthesia, and thereby preventing any complications like abscess and fistula formation.



**Fig 1:** Orthopantomogram (OPG)



**Fig 2:** Metal piece and fibrous tissue retrieved from lower lip

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