

## Foreign Body (Bamboo Stick) Impaction In Mandibular Vestibule With Draining Cutaneous Sinus

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### Abstract:

Foreign bodies may impacted in the oral cavity following a road traffic accident, assault or iatrogenically. Foreign bodies such as gauze piece, needles, screws, gutta percha and wood particles are commonly encountered. Most of the foreign bodies are generally symptomatic and need intervention as they show signs of inflammation with purulent discharge. An unusual case of traumatic foreign body (bamboo stick) impacted in mandibular vestibule due to an accident 2 years back and its treatment are presented in this paper.

**Key Words:** Foreign body, bamboo stick, de-epithelialisation

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### I. INTRODUCTION:

Foreign bodies in the oral and maxillofacial region are not rare because of the natural communication with the outside environment in some areas. They are often overlooked. They may be missed because the materials are small and provoke minimal stimulus<sup>1</sup>. Nut shells, clothing buttons, plastic emblems, screw covers, hemostatic pack, resin tube and a gutta percha have already been described and the majority of these cases involve infants. Often the resulting lesions can lead to a misdiagnosis of odontogenic cysts or tumours<sup>2</sup>. This paper presents a case of foreign body impaction in mandibular vestibule.

### II. CASE PRESENTATION

A 42-year-old female patient reported to the department of Oral and Maxillofacial Surgery with a complaint of discharge in the chin region for past 2 years. There was history of trauma to the face 2 years ago. On examination, there was sinus tract opening in right parasymphysis region on lower border of mandible with serous discharge (Figure 1a). Intraoral examination revealed erythematous vestibular mucosa in right lower back teeth region (Figure 1b). Intraoral periapical x-ray with Gutta percha tracing and orthopantomogram (OPG) did not show any relevant findings (Figure 2a). However, MRI revealed impaction of a foreign body in the right lower gingivobuccal sulcus (GBS) measuring approximately 14mm length with a chronic abscess of approximately 31 x 10 mm<sup>2</sup> (Figure 2b). The patient then underwent retrieval of foreign body and de-epithelialisation of sinus tract was done under local anaesthesia. (Figure 3a). It was found to be bamboo stick. At one month follow up, the patient was asymptomatic and healing was satisfactory (Figure 3b).



Fig 1a. Extra oral sinus tract

Fig 1b. Intra oral view



Fig 2a. OPG showing no significant findings

Fig 2b. MRI showing foreign body impaction in right lower GBS



Fig 3a. De-epithelization of sinus tract. (Inside picture showing retrieved bamboo stick). b- Satisfactory healing at 1 month follow up.

### III. DISCUSSION:

Foreign bodies may be deposited in the oral cavity either by traumatic injury or iatrogenically. Motor vehicle accidents and bullet wounds are common causes of traumatic injury. Glass pieces are the most frequently reported traumatic foreign bodies<sup>3</sup>.

Although it is extremely rare, wood can be considered an ideal medium for microbial agents because of its organic nature and porosity, and it is capable of inducing a reparative granuloma formation, suppuration or chronic inflammation. Infection is more frequent, however, and sometimes wood may also lead to an aseptic foreign body reaction. Both types of inflammation demand complete surgical removal of the retained foreign body in order to cure the symptoms<sup>2</sup>.

Foreign bodies often incite a chronic inflammatory reaction with the deposition of mineral salts, similar to other types of calculi formation such as sialolithiasis, rhinolith and tonsillolith<sup>2</sup>. Frequently, it is difficult to detect these impacted foreign bodies clinically, and they pose a diagnostic challenge. The visibility of different materials on plain radiographs depends on their ability to attenuate-rays. Foreign bodies may be visualized, depending on their inherent radio density and proximity with the issue in which they are embedded. Metallic objects, unless made of aluminum, are opaque on radiographs. Plain radiograph and computed tomography are able to reveal foreign bodies such as stones, displaced pieces of teeth various metals and glass.<sup>3</sup> Since wood is an organic material with low density, plain radiographs are almost unable to detect their presence in soft tissues and an ultrasound is the best imaging modality for detection of suspected wooden foreign bodies in soft tissues. However, when wood induces calcification, it can be detected by conventional radiographic exams.<sup>2</sup> In our case, the foreign body was a small piece of bamboo stick, which was evident in an MRI.

Even if the patient is asymptomatic, removal of these foreign bodies is mandatory, since these objects usually lead to secondary infection, with abscess and fistula formation. Depending on the type of trauma, the composition and location of the foreign bodies can vary considerably as superficial and penetrating foreign bodies.

Superficial bodies are usually easy to remove if seen, and penetrating foreign bodies are more difficult to remove. It is necessary to determine whether the foreign body is near vital structures or not. In most documented instances, patients present with oral pain and signs of inflammation with purulent discharge. Reports of asymptomatic foreign bodies are rarely reported in the dental literature<sup>3</sup>.

These retained foreign bodies are capable of causing inflammation, abscess formation as well as chronic pathologies including granulomatous tissue reaction, fistula formation and osteomyelitis if unnoticed and not removed<sup>3</sup>. If these foreign bodies are impacted near any vital structures and unnoticed, they can also lead to life threatening emergencies. Szold et al. reported on two cases of pistachio nutshell foreign bodies that resulted in acquired tracheoesophageal fistulas<sup>4</sup>. A rare phenomenon observed following attempted retrieval of oral foreign bodies, especially those located or protruding deep into the oral cavity, is non-infectious epiglottitis. Blind finger sweeps during attempted removals may cause traumatic injury to the epiglottitis with eventual onset of epiglottitis<sup>5</sup>.

#### **IV. CONCLUSION:**

Accidental foreign bodies (FBs) in the oral cavity are rare but can cause serious and life-threatening complications if unnoticed and untreated. Hence a comprehensive history and clinical examination along with an appropriate imaging has to be done to unmask the exact location of the foreign body and aid in best treatment planning.

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