

# Retrieval of Foreign Body from Mandibular Arch - A Case Report

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**Abstract:** Foreign bodies are very common in young children. The occurrence of foreign bodies such as metal screws, staple pins, darning needles, pencil leads, beads, and toothpicks lodged in the oral cavity have been widely reported across the globe. They may get accidentally implanted in the oral cavity either by trauma, ingestion, aspiration, or iatrogenic reasons. These foreign bodies may cause infection followed by a painful condition. These are usually symptomatic and show various signs of inflammation such as swelling, and purulent discharge. Such cases indicate the lack of awareness and dental neglect by the parents. These conditions are usually diagnosed by accident on radiographic examinations or pain and signs of inflammation such as purulent discharge associated with it. A proper diagnosis should be made to determine the exact location of the foreign body. Before its removal, a proper investigation should be conducted. Computed tomography (CT) scan, radiographs, ultrasound, and magnetic resonance imaging (MRI) can be done depending on the foreign body's composition, size, and location. Because of the risk of migrating to adjacent areas, these should be performed immediately during surgery. Other common conditions include salivary gland lesions, mucocoele being one of the most common salivary gland lesions. It is usually painless but may present with difficulty in activities like eating and speaking for the patients. They are most frequently found in the lower lip region. Mucocoeles can be of two types: Extravasation type, which is usually a result of trauma to salivary glands. While the Retention type occurs due to a decrease or absence of glandular secretions. This article presents a case of surgical removal of an unusual foreign body followed by surgical removal of the mucocoele from the lower lip region caused due to the same.

**Keywords:** Foreign body, Mucocoele, Iatrogenic foreign body

## 1. Case Description

A 10 - year - old boy reported to the Department of Pediatric and preventive dentistry, K. D. Dental College and Hospital, Mathura with a chief complaint of recurrent swelling in the lower lip region since the age of 2 years. The patient had a history of an accident at the age of 11 months which had led to a fracture in his mandible in the anterior region. Circum - mandibular wiring was done for the management of the fracture with a stainless - steel wire.

### On intra - oral examination,

A small fluctuant painless swelling was seen in the lower lip region. Root stumps were seen irt 71, 72, and 73.

### Investigation

An orthopantomogram and an intraoral periapical radiograph (irt 71, 72, and 73) were advised which revealed the presence of a stainless - steel wire piece which was seemingly a remnant of the circummandibular wiring done at the age of 11 months because there was no history of any other dental treatment given to the patient.

Other investigations such as CBC and BT - CT were advised that came out to be normal. Patient was negative for Hepatitis and HIV.

### Treatment Plan

Surgical removal of the foreign body along with the extraction of root stumps irt.71, 72 and 73 under local anaesthesia.

Excision of mucocoele wrt. Lower lip



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INTRAORAL

Another finding was a large fluctuant swelling in the lower lip region. Desired investigations were done and the final diagnosis came out to be mucocele. Vertical Incision was given followed by a gentle dissection of the lesion. Sutures were placed and patient was again recalled after 7 days for the suture removal of the same.



OPG



Flap was raised



IOPAR



Incisions were made irt.31 32 33)

**Treatment Done**

A thorough oral prophylaxis was done as a plaque control regimen. Extraction was done irt.71, 72, and 73. Incisions were made to expose the underlying wire fragment. As the wire was embedded in bone, bone cutting was performed using a micromotor hand piece. The embedded fragment was elevated and then removed. Sutures were given, and patient was recalled after 1 week for suture removal. Post operative instructions were given and medications were prescribed.



Foreign body (SS wire) was exposed



Bone cutting was done



Post operative IOPAR



Extracted teeth and foreign body



Sutures placed

These foreign bodies are usually difficult to detect and pose a problem in diagnosis. They may be detected by plain radiographs or specialized imaging systems like OPG, CBCT, etc. These foreign bodies may cause infection followed by a painful condition. They are usually symptomatic and show various signs of inflammation, such as swelling and purulent discharge. Even if they are asymptomatic, it's mandatory to remove these objects as they may lead to secondary infection with abscess and fistula formation. Like in our case the patient was asymptomatic but there was a recurrent swelling in the lower lip region. The radiographs revealed a radio - opaque object in the lower jaw region. The patient gave a history of an accident at the age of 11 months which had led to a mandibular fracture for which he underwent circum - mandibular wiring. The patient didn't report any other trauma or treatment so we came to a conclusion that the foreign body, in this case, is a stainless - steel wire piece that was used for the circum - mandibular wiring.

There was also a swelling in his lower lip region due to the presence of the foreign body and after proper examination and investigation the final diagnosis came out to be mucocele. The incidence of mucoceles in the general population is 0.4-0.9%.<sup>3</sup> There is no specific gender predilection. Mucocele, fibroma, lipoma, etc. appear as a swelling on the lower lip and can be distinguished from mucocele based on their clinical appearance, colour, consistency, etiology, and location.<sup>3</sup>

Puliyel D. et al described a case of a patient with an asymptomatic lesion that presented as a benign tumor - like mass, but which was later found to be rubber - based impression material implanted in the mucobuccal fold.

Taking a thorough history and proper examination of the lesion is important in diagnosing the oral mucocele. Location, history of trauma, rapid appearance, variation in size, bluish colour and consistency of the swelling are some of the important points in diagnosis of mucocele.<sup>4</sup> In our case the patient had a history of trauma and history of recurrent swelling in his lower lip region.

The conventional treatment of mucocele involves surgical excision of the surrounding mucosa and glandular tissue. To reduce the chance of recurrence, the lesion should be removed down to the muscle layer.

## 2. Discussion

Foreign bodies are very common in children. It is widely reported around the world that foreign objects such as metal screws, staples, needles, pencil leads, beads, and toothpicks get caught in the mouth.<sup>2</sup> They may get implanted in the oral cavity either by trauma or by iatrogenic causes. Chandran N. et al reported a case of lodgement of a staple pin in a neglected decay in the left maxillary deciduous first molar in a six year old male patient. The child reported of pain which was spontaneous and aggravated on chewing. An emergency extraction of the tooth involved was performed under local anaesthesia.<sup>2</sup>

### 3. Conclusion

The presence of any foreign object in the oral cavity can lead to severe complications. Dental neglect by the parents may end up in sacrificing the tooth. 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.

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