

## Extraction of Submerged Teeth Underlying A Malfunctioning Unethically Prepared Denture: A Case Report

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### ABSTRACT

Retained roots accounted during regular clinical practice which can be originated as a result of previous not so carefully performed extraction procedure, during which they are missed out by choice of virtue or unintentionally. Their removal at proper time and by following proper protocols facilitates hindrance free future dental implant or dental prosthesis. The procedure so performed is a surgical procedure frequently accomplished on account of proper clinical knowledge and surgical expertise

**Keywords:** Retained submerged root stumps, Dental prosthesis, Root removal techniques

### INTRODUCTION

The retained tooth root is a common finding arise due to tooth fracture, which may occur for various reasons. Apart from regular clinical case scenarios retained roots can alter with the patient management modalities as these retained roots can enhance the stress levels and also turned out to be not so aesthetic during routine examination and often require unique management protocols those are not encountered in routine exodontia. This article brings light upon a number of attempted surgical modalities and pros and cons of the accounted surgical exodontia.

### CASE REPORT

A 65-year-old male patient reported to the department of Oral & maxillofacial surgery with a chief complaint of pain in his upper and lower jaws since 2 months. On clinical examination malfunctioning and unethically fabricated removable denture found in his upper and lower jaw by a local practitioner which can't even get removed by the patient itself.



(Fig 1: Ill fitted dentures)

Both intraoral & extraoral examination done. Medical history, dental history, history of habits were taken. On history taking patient appeared to be diabetic and on ecospirin since 4 years.

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(Fig 2: OPG of the concerned patient)

On radiographic examination patient had a count of sixteen teeth (11, 12, 13, 14, 18, 21, 22, 23, 25, 28, 34, 35, 43, 44, 45, and 48) in the oral cavity underlying the denture.

By administration of local anaesthetic agent (2% lidocaine without Adrenaline) both the dentures were removed and the oral health of the patient was severely compromised because of the ill-fitting dentures.



(Fig3: both the dentures were removed by administration of local anaesthesia)

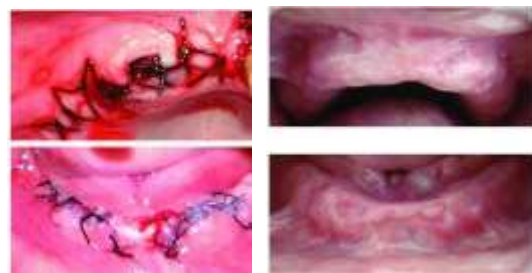


(Fig 4: intraoral photographs after removal of both of the malfunctioning dentures)

As there was minimum crown proportion of tooth, which cannot be taken as abutment for fixed prosthesis and which cannot be treated endodontically were extracted sequentially in a particular order at subsequent appointments.



(Fig 5: extraction done under LA in subsequent appointments)



(Fig 6a&b: sutures were removed on the next appointment and proper healing is checked on subsequent follow ups)

After healing of the sockets and rehabilitation the patient was advised for complete denture for both the arches.

## DISCUSSION

Extraction of retained roots need a proper surgical setup such as:

Elevators for luxation, Forceps for anchorage, Retractors for proper surgical vision, Dental mirrors for direct indirect vision, Scissors for suture cutting, Surgical bur, Sterile saline, Scalpels in case of giving an incision, Curets to debridement, Dental explorers to check the mobility, Haemostats for bleeding control, Periodontal Probes, Rongeurs for crushing any sharp bony spicule and margins, Bone files, Local anaesthetic needles and syringes, Irrigation needles and syringes, Local anaesthetic (2% lidocaine), Sterile gauze for haemostasis and direct application of pressure, Sterile water, Bite block

Let's discuss about few methods for the accomplishment of the same:

**Open Surgical Technique:** In cases where clinical approach is not enough for the execution of extraction procedure the mucoperiosteal flap need to be elevated by the means of open surgical technique. In case of full thickness flap harvesting process the underlying periosteal layer also taken in consideration along with the removal of cortical bone if needed considering reducing the thickness of remaining bone.

**Closed Surgical Technique:** Without creating a mucoperiosteal flap, this technique is useful in case the root stumps in present coronally in respect of the alveolar ridge. After proper clinical assessment about the position of the root stumps dental elevators are used following one of three fundamental principles: (1) a wheel, (2) a lever, and (3) a wedge. Cryer elevators acts upon wheel principle when used in this manner. At the time of using an elevator as a wheel, to lift up the root stump the elevator must be used by creating a lifting arch. On the other hand, while using the elevator as on liver principal tooth is supposed to be used as a fulcrum and for the sake of engaging an elevator a purchase point is created.

**Endodontic File Technique:** The use of endodontic files to retrieve retained root segments brought a new era in the world of extraction. By the mechanism of engagement and friction resistance collaboration the endodontic file in engages coronally in the retained root stumps, after binding the file in to the place the root stumps is luxated from its position. A periodontal probe can be used for measuring the depth of the remaining tooth roots before extraction.

Whatever the technique followed a through irrigation with sterile saline and applying direct pressure on the bony socket, in case of any periapical pathology associated with the retained tooth root such as periapical abscess or infection a proper curettage is performed with the surgical curette for debridement of the debris. If open surgical technique is undertaken then the wound margins are approximated and sutured with a non-absorbable synthetic suture material and proper follow up done for further suture removal and healing check-up.

#### **Indications:**

Here to list out some indications for the extraction of root fragments are:

- Underlying periapical infection
- Planning for dental implant placement
- Pain
- Periodontal disease
- Caries
- Preservation of vital adjacent structures
- Patient aesthetic concerns

#### **Contradiction:**

In some cases not going for an extraction is a beneficial choice to be made such as preserving the ridge height and preventing it from resorption by preserving submerged root segments. Apart from the cases of impaction there are some vital underlying structures like inferior alveolar nerve close to the retained tooth root accounts for retention of the same

#### **CONCLUSION**

In now a days OPD retained submerged root are way too common finding and should be dealt with equal apprehension and consideration of aesthetic point of view. In this article we have undergone for the removal of submerged root stumps underlying a malfunctioning and unethically prepared denture which was not removable itself and compromising the oral hygiene significantly. Dentists and

surgeons who routinely extract teeth often have a well-developed approach to removing retained roots to maintain clinical efficiency. As the days are passing, we are heading towards a modern era of advancement where dentist encounter such cases with appropriate clinical skill and approaches.

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