ISSN: 2581-5989
PubMed - National Library of Medicine - ID: 101738774

International Journal of Dental Science and Innovative Research (IJDSIR)

IJDSIR : Dental Publication Service

Available Online at: www.ijdsir.com

Volume – 3, Issue – 3, May - 2020, Page No. : 408 - 409

Prevention of tuberosity fractures during extraction of maxillary third molars: A Technical Note

[1]Dr.Marimallappa T R, MDS, FICOI, FIBCSOMS, FAM, Associate Professor, Dept. of Oral and Maxillofacial Surgery, Sri Siddhartha Dental College & Hospital, Sri Siddhartha University, Tumkur, Karnataka, India.

[1]Dr.Preethi Bhat, MDS, FICOI, FAM, Associate Professor, Dept. of Oral and Maxillofacial Surgery, Sri Siddhartha Dental College & Hospital, Sri Siddhartha University, Tumkur, Karnataka, India.

[2]Dr. Supriyo Pal, MDS, Senior Lecturer, Dept. of Oral and Maxillofacial Surgery, Sri Siddhartha Dental College & Hospital, Sri Siddhartha University, Tumkur, Karnataka, India.

Corresponding author: Dr.Preethi Bhat, MDS, FICOI, FAM, Associate Professor, Dept. of Oral and Maxillofacial Surgery, Sri Siddhartha Dental College & Hospital, Sri Siddhartha University, Tumkur, Karnataka, India.

Citation of this Article: Dr.Marimallappa T R, Dr.Preethi Bhat, Dr.Supriyo Pal, "Prevention of tuberosity fractures during extraction of maxillary third molars: A Technical Note", IJDSIR- May - 2020, Vol. – 3, Issue -3, P. No. 408 – 409.

Type of Publication: Original Research Article

Conflicts of Interest: Nil

Abstract

Maxillary tuberosity fracture is one of the more frequently encountered complication following maxillary third molar extractions . Most of the articles that are published on maxillary tuberosity fractures have always focused on management, and very few articles have been written on its prevention.

The objective of this article is to describe a technique which minimises the chances of tuberosity fracture during extraction of maxillary third molars.

This article provides information about easy and repeatable method especially for general practitioners to prevent maxillary tuberosity fractures during third molar extractions and helps to minimise various complications associated with tuberosity fractures

Keywords: Tuberosity fractures ,Maxillary third molar , Maxillary Tuberosity.

Introduction

Maxillary tuberosity fracture is one of the more frequently encountered complication following maxillary third molar extractions.[1]

Maxillary tuberosity fractures can lead to various complications like, oro-antral communication, oro-antral fistula, maxillary sinusitis, life threatening haemorrhage, subconjunctival haemorrhage, infections, maxillary necrosis, restriction of mandibular movements due to disruption of pterygoid muscles and ligaments. Rehabilitation with dental implants can become difficult. Deafness may occur from disruption of pterygoid hamulus and tensor veli palatini which may lead to the collapsing of the eustachian tube.[1,2,3]

Most of the articles that are published on maxillary tuberosity fractures have always focused on management, and very few articles have been written on its prevention.[4,5] There is a paucity of surgical techniques in current literature, to aid the surgeon to minimize this serious complication. we propose a simple technique to minimize the possibility of maxillary tuberosity fracture during extraction of maxillary third molars.

Technique

At the beginning of the procedure, gingiva is detached from the maxillary third molar. Mouth opening is kept to the minimal in order to gain adequate access to the distal surface of the maxillary third molar. A periotome is inserted into the periodontal ligament space from the distobuccal area of the third molar, till the middle third of the distal surface of the root (FIG 1). This severs the periodontal ligaments, enlarges the periodontal ligament space and separates the distal surface of the root from the bone. Then the extraction is carried out in the regular fashion with extraction forceps. A slender, sharp, molt no 9 periosteal elevator can also be used, if there is no availability of a periotome.

Clinical Significance

Even if there is a minor bone fragmentation, the bone fragments remain attached to the periosteum and the wound heals uneventfully, since the tooth is separated completely from the bone when retrieving it from the socket.

The problem associated with wedging of the elevator, which may in excessive force ,in turn may result in the tuberosity fracture, can be minimized with this technique .This technique is specially beneficial to general practitioners and trainees in predictable extraction outcomes.

Radiological examinations help in preoperative planning to avoid complications.[2] If ankylosis is detected, teeth with ankylosis cannot be extracted with the method proposed and trans-alveolar method of extraction needs to be employed.

Acknowledgements: All the authors have viewed and agreed to the submission

References

1. Bertram AR, Rao ACA, Akbiyik KM Et al: Maxillary tuberosity fracture: A life threatening haemorrhage following simple exodontia. Aust Dent J 2011; 56(2): 212-5.
2. Chrcanovic BR, Maia BF: Considerations of maxillary tuberosity fractures during extraction of upper molars: A literature review. Dent Traumatol 2011; 27:393-8.
3. Thirumurugan K Et al: Maxillary tuberosity fracture and subconjunctival hemorrhage following extraction of maxillary third molar. J Nat Sci Biol Med. 2013; 4(1):242-5.
4. Lapointe H: How to manage tuberosity fracture during extraction. J Can Dent Assoc 2014; 80: e62.
5. Ngeow WC: Management of the fractured maxillary tuberosity: an alternative method. Quintessence Int 1998; 29(3):189-90.

Legends Figure

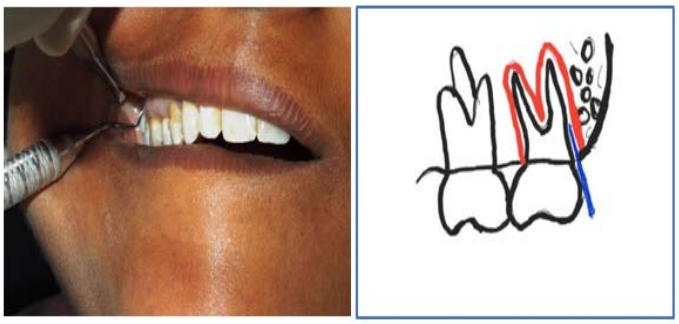

Fig 1: Insertion of periotome into the PDL space distal to third molar.