

Clinical Trial Protocol

Iranian Registry of Clinical Trials

19 Jul 2026

The effect of gingival fiberotomy by Nd:YAG laser on Forced tooth eruption for clinical crown lengthening

Protocol summary

Summary

Background: Clinical crown lengthening by forced tooth eruption is followed by conventional surgical methods. This study aimed to determine the clinical usage of Nd:YAG laser in clinical crown lengthening by forced tooth eruption. Materials and Methods: Twenty patients who were candidates for clinical crown lengthening underwent forced tooth eruption. Inclusion criteria: a single-rooted tooth with a crown to root ratio clinically appropriate. Exclusion criteria: plaque index higher than 20%, positive bleeding on probing. Intervention: Fiberotomy with Nd:YAG laser was performed 2 days after initiation of forced tooth eruption and every 2 weeks thereafter to reach to optimum clinical crown. Primary outcome: Position of gingival margin.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT138901243690N1**
Registration date: **2012-12-26, 1391/10/06**
Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2012-12-26, 1391/10/06

Registrant information

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Name of organization / entity

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Recruitment status

Recruitment complete

Funding source

Dental Research Center, Tabriz

Expected recruitment start date

2010-12-03, 1389/09/12

Expected recruitment end date

2012-07-08, 1391/04/18

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of gingival fiberotomy by Nd:YAG laser on Forced tooth eruption for clinical crown lengthening

Public title

Forced tooth eruption with gingival fiberotomy by laser

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: 1) Healthy periodontium, 2) Single root tooth (incisors, mandibular and maxilla first and second premolars), 3) There are at least two teeth adjacent to the test tooth, 4) The possibility of endodontic therapy on tooth, 5) Acceptable crown- root ratio for prothesis treatment, 5) Willingness to participate in the study, 6) At least 3 mm of attached gingiva on teeth. Exclusion criteria: 1) Plaque index higher than 20%, 2) The patient refused to sign informed consent, 3) Positive bleeding on probing.

Age

To **40 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: 20

Randomization (investigator's opinion)

N/A

Randomization description**Blinding (investigator's opinion)**

Not blinded

Blinding description**Placebo**

Not used

Assignment

Single

Other design features**Secondary Ids**

empty

Ethics committees**1****Ethics committee****Name of ethics committee**

Ethics Committee of Tabriz University of Medical Sciences

Street address

Tabriz University of Medical Sciences

City

Tabriz

Postal code**Approval date**

2011-12-24, 1390/10/03

Ethics committee reference number

90103

Health conditions studied**1****Description of health condition studied**

Teeth with inadequate clinical crown length

ICD-10 code

S02.5

ICD-10 code description

Tooth Fracture

Primary outcomes**1****Description**

Position of gingival margin

Timepoint

every 2 week, 3 monthes

Method of measurement

Periodontal probe

Secondary outcomes**1****Description**

Distance between dental tissue and gingival margin

Timepoint

every 2 week, 3 monthes

Method of measurement

Periodontal probe

Intervention groups**1****Description**

Intervention: Under local anesthesia of Lidocaine 2% with epinephrine 1/80000, fiberotomy with Nd:YAG laser was performed 2 days after initiation of forced tooth eruption and every 2 weeks thereafter to reach to optimum clinical crown.

Category

Treatment - Surgery

Recruitment centers**1****Recruitment center****Name of recruitment center**

Tabriz dental faculty

Full name of responsible person**Street address****City**

Tabriz

Sponsors / Funding sources**1****Sponsor****Name of organization / entity**

Dental Research Center, Tabriz

Full name of responsible person

Pourabbas Reza

Street address

Tabriz Dental Faculty, Golgasht St.

City

Tabriz

Grant name**Grant code / Reference number****Is the source of funding the same sponsor organization/entity?**

Yes

Title of funding source

Dental Research Center, Tabriz

Proportion provided by this source

100

Public or private sector

empty

Domestic or foreign origin

empty
Category of foreign source of funding
empty
Country of origin
Type of organization providing the funding
empty

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Sharing plan

Deidentified Individual Participant Data Set (IPD)

empty

Study Protocol

empty

Statistical Analysis Plan

empty

Informed Consent Form

empty

Clinical Study Report

empty

Analytic Code

empty

Data Dictionary

empty