

Clinical Trial Protocol

Iranian Registry of Clinical Trials

22 Jul 2026

Efficacy of adjunctive low level laser therapy on reduction of pain, swelling and trismus after surgical removal of impacted lower third molar in patients requiring impacted lower wisdom tooth surgery

Protocol summary

Summary

(1) Objectives: reduction of pain, swelling and trismus after wisdom tooth surgery. (2) Designs: In this study, 48 patients (2 groups of 24 patients consist of control group and experimental group) refereed to surgical department of Tabriz faculty of dentistry in 1395 will be chosen and routine wisdom tooth surgery will be done on their lower wisdom tooth. (3) Setting and conduct: one of the groups will be chosen randomly (by using "www.randomizer.com") as experimental group. All surgeries will be done by the same surgeon under same circumstances. (4) Major eligibility criteria: Patients with generally healthy conditions who have at least one class B impacted lower third molar. Exclusion criteria: patients with systemic disease. (5) Intervention: patients in experimental group will be radiated by 550 nm low level laser at 3 joules, intra socket and at 5 joules dosage at the buccal side of the socket after surgery. In other group as the control group, radiation of laser, will be pretended. (6) Main outcome measures (variables): Patients will be examined in first day and 7 days after surgery. Pain would be measured first day and 7 days after surgery. Depending on the pain severity, 0 to 10 would be documented according to VAS system. The amount of Swelling would be measured by determining tragus-mouth corner distances before, first day and 7 days after surgery. Amount of trismus would be measured by determining the distance of edge of upper and lower incisors in maximum opening of mouth, before the surgery, first day and 7 days after surgery.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2016091329785N2**
Registration date: **2016-11-11, 1395/08/21**

Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2016-11-11, 1395/08/21

Registrant information

Name

Farrokh Farhadi

Name of organization / entity

Faculty of Dentistry, Tabriz University of Medical Sciences

Country

Iran (Islamic Republic of)

Phone

+98 41 3335 5921

Email address

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Recruitment status

Recruitment complete

Funding source

Investigator

Expected recruitment start date

2016-08-30, 1395/06/09

Expected recruitment end date

2016-09-20, 1395/06/30

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Efficacy of adjunctive low level laser therapy on reduction of pain, swelling and trismus after surgical

removal of impacted lower third molar in patients
requiring impacted lower wisdom tooth surgery

IR.TBZMED.REC.1395.558

Public title

The effect of adjunctive laser therapy on reduction of
side effects after surgical removal of impacted lower
wisdom tooth

Purpose

Prevention

Inclusion/Exclusion criteria

inclusion criteria: patients with generally healthy
conditions; having at least one class B impacted lower
third molar. Exclusion criteria: existing any kind of
inflammation in impacted tooth; systemic disease;
history of taking any systemic drugs; previous narcotic
usage.

Age

From **18 years** old to **35 years** old

Gender

Both

Phase

2-3

Groups that have been masked

No information

Sample size

Target sample size: **48**

Randomization (investigator's opinion)

Randomized

Randomization description

Blinding (investigator's opinion)

Double blinded

Blinding description

Placebo

Used

Assignment

Parallel

Other design features

selected patients for experimental group have been
chosen randomly by using the website of
"www.randomizer.com".

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, Golgasht Ave,
Tabriz, IRAN

City

Tabriz

Postal code

Approval date

2016-08-29, 1395/06/08

Ethics committee reference number

Health conditions studied

1

Description of health condition studied

Swelling

ICD-10 code

R60

ICD-10 code description

Oedema, not elsewhere classified

2

Description of health condition studied

Pain

ICD-10 code

R52.9

ICD-10 code description

Pain, unspecified

3

Description of health condition studied

Trismus

ICD-10 code

R25.2

ICD-10 code description

Cramp and spasm

Primary outcomes

1

Description

Trismus

Timepoint

Before, One and Seven days after surgery

Method of measurement

Millimeters by meterstick

2

Description

Pain

Timepoint

Before, One and Seven days after surgery

Method of measurement

By VAS system

3

Description

Swelling

Timepoint

Before, One and Seven days after surgery

Method of measurement

Millimeters by meterstick

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group: the surgery site in patients of this group was treated with 550 nm infrared laser irradiation, intrasucktely and buccally for 30 seconds.

Category

Prevention

2

Description

Control group: In this group, the handpiece of laser was inserted into the mouth and laser irradiation was pretended in surgery site.

Category

Prevention

Recruitment centers

1

Recruitment center

Name of recruitment center

Faculty of Dentistry, Tabriz University of Medical Sciences

Full name of responsible person

Farrokh Farhadi

Street address

Faculty of Dentistry, Tabriz University of Medical Sciences, Golgasht Ave, Tabriz, IRAN

City

Tabriz

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Vice Chancellor for Research of Tabriz University of Medical Sciences

Full name of responsible person

Mohammadreza Rashidi

Street address

Faculty of Dentistry, Tabriz University of Medical Sciences, Golgasht Ave, Tabriz, IRAN

City

Tabriz

Grant name

Grant code / Reference number

Is the source of funding the same sponsor organization/entity?

Yes

Title of funding source

Vice Chancellor for Research of Tabriz University of

Medical Sciences

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

Person responsible for general inquiries

Contact

Name of organization / entity

Surgical Department of Tabriz Dentistry Faculty

Full name of responsible person

Farrokh Farhadi

Position

Assistant Professor

Other areas of specialty/work

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Full name of responsible person

Farrokh Farhadi

Position

Assistant professor

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Web page address

Person responsible for updating data

Contact

Name of organization / entity

Tabriz Faculty of Dentistry

Full name of responsible person

Farrokh Farhadi

Position

Assistant Professor

Other areas of specialty/work**Street address**

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Web page address

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