Clinical Trial Protocol
Iranian Registry of Clinical Trials

18 Sep 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

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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

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
IR.TBZMED.REC.1395.558

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, intrasucketly 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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Person responsible for scientific inquiries

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Farrokh Farhadi
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Assistant professor
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Person responsible for updating data

Contact

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Tabriz Faculty of Dentistry

Full name of responsible person
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Position
Assistant Professor

Other areas of specialty/work

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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