Clinical Trial Protocol
Iranian Registry of Clinical Trials

10 Nov 2026

The effect of low level laser on the depth of anesthesia during treatment of lower mandibular molar r with irreversible pulpitis teeth

Protocol summary

Summary

In randomized clinical trial study 44 patient with symptomatic irreversible pulpitis in mandibular teeth are selected. in one(22 patient) group low level laser is exposed and another group are control. Pain intensity is measured before start of protocol with visual analog scale.electric pulp test is measured after and before of laser irradiation to buccal aspect of teeth. Dose of laser is 15 j/cm2 with diode laser.laser irradiates before injection.electric pulp test is done immediately after irradiation of laser for measurement of nerve signal transmission. Inferior alveoular nerve block injection is done.index for success of injection is lip numbness. After that access cavity preparation is started and the pain measured during dentin cutting and exposure of pulp with visual analog scale.

General information

Acronym

tehran endodontic study

IRCT registration information

IRCT registration number: **IRCT2016112631102N1**
Registration date: **2017-01-22, 1395/11/03**
Registration timing: **prospective**

Last update:
Update count: **0**

Registration date

2017-01-22, 1395/11/03

Registrant information

Name

Abbas Khosravi

Name of organization / entity

Tehran University of Medical Sciences

Country

Iran (Islamic Republic of)

Phone

+98 21 8835 1173

Email address

sh-ghabraei@tums.ac.ir

Recruitment status

Recruitment complete

Funding source

Investigator

Expected recruitment start date

2017-01-29, 1395/11/10

Expected recruitment end date

2017-02-28, 1395/12/10

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of low level laser on the depth of anesthesia during treatment of lower mandibular molar r with irreversible pulpitis teeth

Public title

The effect of low level laser on the depth of anesthesia during treatment of lower mandibular molar with irreversible pulpitis teeth

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: irreversible pulpitis in lower molar teeth, understanding of testimonial, accessibility to patient, age at least 18 years old. Exclusion criteria: history of systemic diseases, heart disease, diabetes, cancer, psychological problem, use of antibiotic and analgesic, malocclusion, lesion in mouth.

Age

From **18 years** old to **99 years** old

Gender

Both

Phase
N/A
Groups that have been masked
No information
Sample size
Target sample size: **44**
Randomization (investigator's opinion)
Randomized
Randomization description
Blinding (investigator's opinion)
Double blinded
Blinding description
Placebo
Not used
Assignment
Parallel
Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Tehran University of Medical Sciences
Street address
Tehran University of Medical Sciences, Qhods St., Keshavarz blvd.
City
Tehran
Postal code
Approval date
2016-11-15, 1395/08/25
Ethics committee reference number
IR.TUMS.VCR.REC.1395.1037

Health conditions studied

1

Description of health condition studied
Irreversible Pulpitis
ICD-10 code
K04.0
ICD-10 code description
Pulpitis

Primary outcomes

1

Description
Pain
Timepoint
Before laser irradiation and during dentin and pulp exposure
Method of measurement
Visual Analog Scale

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group: usage of low level laser on the buccal of teeth and use the laser in the on mode.
Category
Treatment - Other

2

Description
Contorol group: keeping the low level laser on the buccal of teeth but not turn on the laser and use laser in the off mode.
Category
Placebo

Recruitment centers

1

Recruitment center
Name of recruitment center
Endodontic department, Dentistry faculty, Tehran University of Medical Sciences
Full name of responsible person
Abbas Khosravi
Street address
Dentistry faculty, Tehran University of Medical Sciences, North Kargar street
City
Tehran

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Tehran University of Medical Sciences
Full name of responsible person
Abbas Khosravi
Street address
Tehran University of Medical Sciences, Qhods St., Keshavarz blvd.
City
Tehran
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source

Tehran 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
Tehran University of Medical Sciences

Full name of responsible person
Abbas Khosravi

Position
Resident of endodontic

Other areas of specialty/work

Street address
Dentistry faculty, Tehran University of Medical Sciences, North Kargar street

City
Tehran

Postal code

Phone
+98 24 3344 6220

Fax

Email
abbaskhosravi45@yahoo.com

Web page address

Person responsible for scientific inquiries

Contact

Name of organization / entity
Tehran University of Medical Sciences

Full name of responsible person
Sholeh Ghabrayi

Position
Endodontist

Other areas of specialty/work

Street address
Dentistry faculty, Tehran University of Medical Sciences, North Kargar street

City
Tehran

Postal code

Phone
+98 21 8835 1173

Fax

Email
sholehghabraei@yahoo.com

Web page address

Person responsible for updating data

Contact

Name of organization / entity
Tehran University of Medical Sciences

Full name of responsible person
Abbas Khosravi

Position
Resident of dentistry

Other areas of specialty/work

Street address
Dentistry faculty, Tehran University of Medical Sciences, North Kargar street

City
Tehran

Postal code

Phone
+98 24 3344 6220

Fax

Email
abbaskhosravi45@yahoo.com

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