Clinical Trial Protocol
Iranian Registry of Clinical Trials

17 Sep 2026

Comparison of low level laser therapy and combination therapy in dentinal hupersensitivity :a double blind clinical trial

Protocol summary

Summary

Abstract Objectives: The aim of the current study was to evaluate desensitizing effect of combined application of Diode Lasers (DLs) with two different output power levels and compare it with single DL therapy. Background: Diode lasers have been tested in various studies with different output powers and they have demonstrated an equal or better desensitizing effect than fluoride varnish, NK10% gel and Gloma. Material & methods: 8 patients with 62 hypersensitive teeth were selected and randomly divided into two groups: single group was treated with 3w DL, one time and the teeth in combined group were emitted tree times (the first time with 0.2w, then with 3w and the third time, 48 and 96 hours after the baseline visit with 0.2w DL). The amount of Dentine Hypersensitivity (DH) was evaluated, using tactile and thermal stimulus, immediately before and after irradiation, 1 week, 1 and 3 months after the first visit. Inclusion criterion: having at least 2 hypersensitive teeth. Exclusion criteria: cracked teeth; non vital teeth and history of systemic disease

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2012101211086N1**
Registration date: **2012-11-04, 1391/08/14**
Registration timing: **registered_while_recruiting**

Last update:
Update count: **0**

Registration date

2012-11-04, 1391/08/14

Registrant information

Name

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Name of organization / entity

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Recruitment status

Recruitment complete

Funding source

Shahid Beheshty University of Medical of Sciences

Expected recruitment start date

2011-10-23, 1390/08/01

Expected recruitment end date

2013-02-19, 1391/12/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison of low level laser therapy and combination therapy in dentinal hupersensitivity :a double blind clinical trial

Public title

Laser therapy in dentinal hypersensitivity

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criterion: having at least 2 hypersensitive teeth. Exclusion criteria: cracked teeth; non vital teeth and history of systemic disease.

Age

No age limit

Gender

Both

Phase
N/A
Groups that have been masked
No information
Sample size
Target sample size: **62**
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
shahid beheshti university of medical science
Street address
Velenjak, shahid beheshti university of medical science
City
tehran
Postal code
Approval date
2011-10-03, 1390/07/11
Ethics committee reference number
90-1-92-7839-6629

Health conditions studied

1

Description of health condition studied
dentinal hypersensitivity
ICD-10 code
K03.8
ICD-10 code description
Sensitive dentine

Primary outcomes

1

Description
dentinal hypersenstivity
Timepoint
befor treatment,1 week,1month,3 month
Method of measurement
VAS

Secondary outcomes

empty

Intervention groups

1

Description
high level laser
Category
Treatment - Devices

2

Description
high level & low level laser therapy
Category
Rehabilitation

Recruitment centers

1

Recruitment center
Name of recruitment center
dental faculty of shahid beheshti university of medical science
Full name of responsible person
Street address
City
tehran

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
dental faculty of shahid beheshti university of medical science
Full name of responsible person
Fariba tadayon
Street address
Velenjek , dental school
City
tehran
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
dental faculty of shahid beheshti university of medical science
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

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Full name of responsible person

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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