

Clinical Trial Protocol

Iranian Registry of Clinical Trials

05 Jul 2026

Comparison of low level laser therapy and combination therapy in dentinal hypersensitivity :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 Beheshti 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 hypersensitivity :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 hypersensitivity

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

dentical 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

dentical 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

dentical 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

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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