

Clinical Trial Protocol

Iranian Registry of Clinical Trials

20 Jun 2026

Clinical assessment the effects of laser irradiation prior to restoration placement on postoperative sensitivity of Class V resin composite restorations

Protocol summary

Summary

Aim : Clinical evaluation and hypersensitivity comparison before and after treatment with or without laser application in class 5 cavities Study design : Randomized , double blind placebo controlled clinical trial Application method: A total 25 adult patients with 2 class 5 cavities were selected . The sensitivity of all teeth was examined prior to therapy (Visual analog scale was used). After cavity preparation in study group mustang laser application was done before restoration, but in control group restoration completed in routine way. Blinding process : Person who follow up the patients is totally blind for the process Inclusion criteria: Patients had at least two cervically lesions without restorations Intervention: Application of laser for evaluation of post operative sensitivity variables criteria:The sensitivity of all initially tested teeth was examined 1 day, 2 weeks ,and then 1month after treatment.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2012072810425N1**
Registration date: **2012-12-20, 1391/09/30**
Registration timing: **registered_while_recruiting**

Last update:

Update count: **0**

Registration date

2012-12-20, 1391/09/30

Registrant information

Name

Mahsa Sharifi

Name of organization / entity

Mashhad Dental University

Country

Iran (Islamic Republic of)

Phone

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Recruitment status

Recruitment complete

Funding source

Vice chancellor for research, Mashhad University of Medical Sciences

Expected recruitment start date

2012-11-21, 1391/09/01

Expected recruitment end date

2013-01-20, 1391/11/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Clinical assessment the effects of laser irradiation prior to restoration placement on postoperative sensitivity of Class V resin composite restorations

Public title

Effects of laser on postoperative sensitivity

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: Patients that inform consent before the study began , had at least two cervically lesions without restorations , were free of any painful symptoms , had good health without any systemic disease and good oral hygiene , were free of periodontal disease and without history of periodontal surgery within 3 months. Patients

were excluded from the study if they had mucosal lesion , Had local or systemic drug usage within 2 weeks , Had lichenoid lesions , were pregnant or nursing, had pacemaker and disease which affect treatment

Age

No age limit

Gender

Both

Phase

2-3

Groups that have been masked

No information

Sample size

Target sample size: 24

Randomization (investigator's opinion)

Randomized

Randomization description**Blinding (investigator's opinion)**

Double blinded

Blinding description**Placebo**

Used

Assignment

Parallel

Other design features

Randomized double blind placebo controlled clinical trial

Secondary Ids

empty

Ethics committees**1****Ethics committee****Name of ethics committee**

Ethics committee of Mashhad medical university

Street address

Daneshgah street

City

Mashhad

Postal code

91775-1365

Approval date

2012-09-22, 1391/07/01

Ethics committee reference number

900853

Health conditions studied**1****Description of health condition studied**

Post operative sensitivity

ICD-10 code**ICD-10 code description****Primary outcomes****1****Description**

Postoperative sensitivity

Timepoint

1 day, 2 weeks and 1 month after intervention

Method of measurement

VAS scale

Secondary outcomes

empty

Intervention groups**1****Description**

Study group : KLO4 head with wavelengths of 0,63μm , and Radiation Power of 25 mW applied 1 minute from facial

Category

Placebo

2**Description**

Control group: without laser treatment group

Category

Placebo

Recruitment centers**1****Recruitment center****Name of recruitment center**

Mashhad Dental University

Full name of responsible person

Dr Hourieh Moosavi

Street address

Vakilabad Street , Park Square

City

Mashhad

Sponsors / Funding sources**1****Sponsor****Name of organization / entity**

Vice chancellor for research, Mashhad University of Medical Sciences

Full name of responsible person

Dr Mohsen Tafaghodi

Street address

Ghoreishi Building , Daneshgah Street

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Mashhad

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, Mashhad 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**

Mashhad Dental University

Full name of responsible person

Dr Hourieh Moosavi

Position

Specialist in operative dentistry

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