

Clinical Trial Protocol

Iranian Registry of Clinical Trials

08 Jul 2026

Comparison of the effects of scaling and root planning with or without photodynamic therapy (with indocyanine green) and 810nm diode laser on clinical parameters and biomarkers of gingival crevicular fluid in chronic periodontitis

Protocol summary

Summary

Comparison of the effects of scaling and root planning with or without photodynamic therapy (with indocyanine green) and 810nm diode laser(LANAP) on clinical parameters and biomarkers of gingival crevicular fluid(IL-1B,IL-4) in chronic periodontitis. The study is a split-mouth double-blind randomized clinical trial, participants were selected from the patients referred for periodontal treatment in the department of periodontics of Shahid Beheshti Dental School. Inclusion criteria: good general health; patient presented with chronic periodontitis as defined by periodontist; patients must have 12 natural teeth with a minimum of three in each quadrant, teeth must have CAL>3 mm & PD>5mm with BOP. Exclusion criteria: systemic diseases including: diabetes mellitus; cancer, HIV, metabolic disorders; pregnancy & lactation; estrogen therapy for female patients; smokers; patient who had received systemic antibiotics within the past 6 months; surgical or non-surgical periodontal treatment within the past 6 months & class III mobility of tooth. Intervention include: 1- photodynamic therapy with laser diode 810 nm, power 0.4 w and indocyanin green+SRP; 2-LANAP with laser diode 810 nm and power 1.5 w+SRP; 3-SRP alone(control). PD, CAL, BOP, IL-1B & IL-4 were defined before and 1 & 3 months after treatment.

General information

Acronym

PDT-LANAP

IRCT registration information

IRCT registration number: **IRCT2015060722598N1**

Registration date: **2016-05-18, 1395/02/29**

Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2016-05-18, 1395/02/29

Registrant information

Name

Mansour Meimandi

Name of organization / entity

Shahid Beheshti Dental School

Country

Iran (Islamic Republic of)

Phone

+98 21 2240 3075

Email address

meimandim@sbum.ac.ir

Recruitment status

Recruitment complete

Funding source

Shahid Beheshti Dental School

Expected recruitment start date

2015-11-03, 1394/08/12

Expected recruitment end date

2015-11-11, 1394/08/20

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison of the effects of scaling and root planning with or without photodynamic therapy (with indocyanine green) and 810nm diode laser on clinical parameters and biomarkers of gingival crevicular fluid in chronic periodontitis

Public title

Effects of laser on inflammatory periodontal disease(periodontitis)

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: good general health; patient presented with chronic periodontitis as defined by periodontist; patients must have 12 natural teeth with a minimum of three in each quadrant, teeth must have CAL>3 mm & PD>5mm with BOP. Exclusion criteria: systemic diseases including: diabetes mellitus; cancer, HIV, metabolic disorders; pregnancy & lactation; estrogen therapy for female patients; smokers; patient who had received systemic antibiotics within the past 6 months; surgical or non-surgical periodontal treatment within the past 6 months & class III mobility of tooth.

Age

From **25 years** old to **65 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **14**

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 Dental School

Street address

Shahid Beheshti Dental School, Daneshjou Blvd., Velenjak

City

Tehran

Postal code

1983963113

Approval date

2015-12-22, 1394/10/01

Ethics committee reference number

IR.SBMU.RIDS.REC.1394.75

Health conditions studied

1

Description of health condition studied

Chronic periodontitis

ICD-10 code

K05.3

ICD-10 code description

Chronic periodontitis

Primary outcomes

1

Description

periodontal depth-

Timepoint

Before treatment,1&3 month after treatment

Method of measurement

PD with periodontal probing

2

Description

clinical attachment level

Timepoint

Before treatment,1&3 month after treatment

Method of measurement

cal with periodontal probing

3

Description

IL-1B

Timepoint

Before treatment,1&3 month after treatment

Method of measurement

ELISA test

4

Description

bleeding on probing

Timepoint

Before treatment,1&3 month after treatment

Method of measurement

observation 30-60 sec after pocket probing

5

Description

IL-4

Timepoint

Before treatment,1&3 month after treatment

Method of measurement

ELISA test

Secondary outcomes

empty

Intervention groups

1

Description

1-SRP alone(Control).

Category

Treatment - Other

2

Description

Photodynamic therapy with laser diode 810 nm. And 0/4 w and indocyaningreen + srp

Category

Treatment - Drugs

3

Description

Laser diode810 nm and 1/5 w + srp

Category

Treatment - Drugs

Recruitment centers

1

Recruitment center

Name of recruitment center

Periodotics Department, Shahid Beheshti Dental School

Full name of responsible person

Dr. Mansour Meimandi

Street address

City

Tehran

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Shahid Beheshti Dental School

Full name of responsible person

Dr. Azita Tehrani

Street address

Shahid Beheshti Dental School, Daneshjou Blvd., Velenjak

City

Tehran

Grant name

Grant code / Reference number

Is the source of funding the same sponsor organization/entity?

Yes

Title of funding source

Shahid Beheshti Dental School

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

Shahid Beheshti Dental School

Full name of responsible person

Dr. Mansour Meimandi

Position

Associate Professor,Periodontics Dept

Other areas of specialty/work

Street address

Shahid Beheshti Dental School, Daneshjou Blvd., Velenjak

City

Tehran

Postal code

1983969411

Phone

+98 21 2240 3075

Fax

Email

meimandim@sbum.ac.ir;

parisayousefnejad@yahoo.com

Web page address

Person responsible for scientific inquiries

Contact

Name of organization / entity

Shahid Beheshti Dental School

Full name of responsible person

Dr. Mansour Meimandi

Position

Associate Proffesor, Periodontics Dept

Other areas of specialty/work

Street address

Shahid Beheshti Dental School, Daneshjou Blvd., Velenjak

City

Tehran

Postal code

1983963113

Phone

+98 21 2240 3075

Fax

Email

meimandim@sbum.ac.ir;

parisayousefnejad@yahoo.com

Web page address

Person responsible for updating data

Contact

Name of organization / entity

Shahid Beheshti Dental School

Full name of responsible person

Parisa Yousef Nejad

Position

Under graduate student

Other areas of specialty/work**Street address**

Shahid Beheshti Dental School, Daneshjou Blvd.,
Velenjak

City

Tehran

Postal code**Phone**

+98 26 3654 1503

Fax**Email**

parisayousefnejad@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