

Clinical Trial Protocol

Iranian Registry of Clinical Trials

15 Jul 2026

A Clinical Trial of the Comparison Between Clinical Parameters of Patients with Moderate Chronic Periodontitis Using Ultrasonic and Er:YAG

Protocol summary

Summary

A- The purpose of this study is to evaluate the clinical parameters after Er:YAG laser application in comparison with ultrasonic scaling and root planing. Study Design: The present study has a non- randomized, single-blind design. Therefore, the investigator who measures the clinical parameters is not aware of the type of treatment. Inclusion criteria: moderate chronic periodontitis disease; age over 18 years; not having systemic disease; no periodontal treatment in the last six months. Exclusion criteria: other treatments for periodontal disease during the study period. Study population: patients with chronic moderate periodontitis disease. Sample size twenty patients. B- Study interventions: scaling with 1- Laser Er:YAG 2- ultrasonic method. C- Intervention Time: 22/05/2014 to 23/08/2014 D- Consequences: Changes in periodontal clinical parameters including: plaque index; probing depth; bleeding on probing; clinical attachment loss and visual analogue scale.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201402164877N18**
Registration date: **2014-06-17, 1393/03/27**
Registration timing: **registered_while_recruiting**

Last update:

Update count: **0**

Registration date

2014-06-17, 1393/03/27

Registrant information

Name

Jaber Yaghini

Name of organization / entity

Isfahan University of Medical Sciences and Health

Services

Country

Iran (Islamic Republic of)

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Recruitment status

Recruitment complete

Funding source

Isfahan University of Medical Sciences

Expected recruitment start date

2014-02-20, 1392/12/01

Expected recruitment end date

2014-08-23, 1393/06/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

A Clinical Trial of the Comparison Between Clinical Parameters of Patients with Moderate Chronic Periodontitis Using Ultrasonic and Er:YAG

Public title

Evaluation of Clinical Periodontal Parameters After Scaling and Root planning with Er:YAG Laser Compared to Ultrasonic Instruments for treatment of Moderate Chronic Periodontitis

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: moderate chronic periodontitis disease; age over 18 years; lack of systemic disease that can affect the outcome of treatment; no pregnancy; no previous periodontal treatment and systemic antibiotics therapy in the last 6 months; not being smoker; the

presence of at least two teeth with probing depths greater than 4 mm in two quadrants. Exclusion criteria: the patient's unwillingness to continue the treatment; failure to properly follow the researchers' instructions; being under other treatment and taking medications which may affect the result.

Age

From **18 years** old to **60 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **20**

Randomization (investigator's opinion)

N/A

Randomization description

Blinding (investigator's opinion)

Single blinded

Blinding description

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

School of Dentistry, Isfahan University of Medical Sciences

Street address

School of Dentistry, Isfahan University of Medical Sciences, Hezarjerib st., Isfahan, Iran.

City

Isfahan

Postal code

8174673461

Approval date

2013-05-20, 1392/02/30

Ethics committee reference number

392408

Health conditions studied

1

Description of health condition studied

Moderate chronic periodontitis

ICD-10 code

K05.3

ICD-10 code description

Chronic periodontitis

Primary outcomes

1

Description

Plaque index

Timepoint

Before the intervention, after six weeks and twelve weeks after the end of intervention,

Method of measurement

Observation of index score

2

Description

Pocket depth

Timepoint

Before the intervention, after six weeks and twelve weeks after the end of intervention,

Method of measurement

Probing in millimeter

3

Description

Attachment loss

Timepoint

Before the intervention, after six weeks and twelve weeks after the end of intervention,

Method of measurement

Probing in millimeter

4

Description

Bleeding of Probing (BOP)

Timepoint

Before the intervention, after six weeks and twelve weeks after the end of intervention,

Method of measurement

Probing- No-unit

5

Description

Visual analogue scale

Timepoint

Immediately after intervention

Method of measurement

Questionnaire

Secondary outcomes

empty

Intervention groups

1

Description

Er:YAG laser (Fotona-fidelis plus Ljubljana-Slovenia) with

following characteristic: Wave length: 2490nm; Energy level: 160 mJ/pulse; Fiber tip: chisel shape; Hand piece: Ro14.

Category

Treatment - Other

2

Description

Ultrasound scaler (UDS-K 2012, Guilin woodpeker Medical instrument co) with following characteristic: output half-excursion force: more than 2N; output tip vibration frequency: 28kHz±3kHz; water pressure: 0.1bar to 5bar.

Category

Treatment - Other

Recruitment centers

1

Recruitment center

Name of recruitment center

Periodontal Department, School of Dentistry, Isfahan University of Medical Sciences

Full name of responsible person

Dr Jaber Yaghini

Street address

Periodontal Department, School of Dentistry, Isfahan University of Medical Sciences, Hezarjerib st., Isfahan, Iran.

City

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Vice of Research, School of Dentistry, Isfahan University of Medical Sciences

Full name of responsible person

Dr Jaber Yaghini

Street address

Periodontal Department, School of Dentistry, Isfahan University of Medical Sciences, Hezarjerib st., Isfahan, Iran.

City

Isfahan

Grant name

Grant code / Reference number

392408

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

Yes

Title of funding source

Vice of Research, School of Dentistry, Isfahan 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

Periodontal Department, School of Dentistry, Isfahan University of Medical Sciences

Full name of responsible person

Dr Jaber Yaghini

Position

Assistant Professor

Other areas of specialty/work

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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