

Clinical Trial Protocol

Iranian Registry of Clinical Trials

26 Jun 2026

Comparative evaluation of the clinical and immunological effects of photodynamic therapy as an adjunctive to scaling and root planing and scaling and root planing alone, in the treatment of moderate to severe chronic periodontitis.

Protocol summary

Summary

The aim of this study was to evaluate the clinical and immunological effects of photodynamic therapy (PDT) as an adjunctive to scaling and root planing (SRP) on the cytokine profile and clinical parameters in moderate to severe chronic periodontitis. Material and method: A total of 24 patients (14 woman and 10 men) aged 18 to 70 years affected with moderate to severe chronic periodontitis were selected. In each quadrant one of the teeth with probing depth ≥ 4 mm was randomly treated with SRP (Control group) and the other was treated with SRP and PDT (Test group). Gingival cervical fluid samples were collected from the deepest part of the periodontal pocket of control and test teeth in baseline and after 3 month. Primary outcome variable include probing depth.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2012121611770N1**

Registration date: **2013-02-18, 1391/11/30**

Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2013-02-18, 1391/11/30

Registrant information

Name

Atabak Kashefimehr

Name of organization / entity

Tabriz University of Medical Sciences

Country

Iran (Islamic Republic of)

Phone

+98 41 1335 5965

Email address

kashefimehra@tbzmed.ac.ir

Recruitment status

Recruitment complete

Funding source

Tabriz University of Medical Sciences

Expected recruitment start date

2012-02-10, 1390/11/21

Expected recruitment end date

2012-11-06, 1391/08/16

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparative evaluation of the clinical and immunological effects of photodynamic therapy as an adjunctive to scaling and root planing and scaling and root planing alone, in the treatment of moderate to severe chronic periodontitis.

Public title

Effect of photodynamic therapy on inflammatory biomarkers and clinical parameters in moderate to severe chronic periodontitis

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: Moderate to severe Chronic periodontitis; existence of a minimum of 12 teeth in oral cavity with at least three natural teeth in four sites per

quadrant; ≥ 3 mm of attachment loss in minimum of 30 percent of teeth; presence of at least one site with pocket depth of ≥ 4 mm with bleeding on probing in per quadrant. Exclusion criteria: The ingestion of systemic antibiotics within the last one year, non-surgical periodontal treatment within the last 6 months; smoking; uncontrolled Diabetes; liver disease; malignancy; radiotherapy; pregnancy; females on estrogen therapy; allergic reactions to Toluidine blue.

Age

From **18 years** old to **70 years** old

Gender

Both

Phase

N/A

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

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Tabriz university of medical sciences

Street address

Tabrize Dental Faculty, Golgasht street

City

Tabriz

Postal code

5166614711

Approval date

2012-12-22, 1391/10/02

Ethics committee reference number

91182

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

probing depth

Timepoint

after 3 month

Method of measurement

Periodontal probe

Secondary outcomes

1

Description

Interleukin-1 β level in gingival crevicular fluid

Timepoint

After 3 month

Method of measurement

ELIZA Kit

2

Description

TNF-alpha level in gingival crevicular fluid

Timepoint

After 3 month

Method of measurement

ELIZA Kit

3

Description

MMP-9 Level in gingival crevicular fluid

Timepoint

After 3 month

Method of measurement

ELIZA Kit

4

Description

MMP-8 Level in gingival crevicular fluid

Timepoint

After 3 month

Method of measurement

ELIZA Kit

Intervention groups

1

Description

Intervention: Photodynamic therapy and scaling and root planing

Category

Other

2

Description

Control : Scaling and root planing alone

Category

Other

Recruitment centers

1

Recruitment center

Name of recruitment center

Tabriz Dental Faculty, Department of Periodontics

Full name of responsible person

Dr. Atabak Kashefimehr

Street address

Golgasht Street, Tabriz Dental Faculty

City

Tabriz

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Dental and Periodontal Research Center of the Tabriz University of Medical Sciences (Primary sponsor)

Full name of responsible person

Dr. Reza Pourabbas

Street address

Tabriz Dental Faculty, Golgasht Street

City

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Grant name

Grant code / Reference number

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

Yes

Title of funding source

Dental and Periodontal Research Center of the Tabriz University of Medical Sciences (Primary sponsor)

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

Person responsible for scientific

inquiries

Contact

Name of organization / entity

Tabriz university of medical sciences

Full name of responsible person

Dr. Atabak Kashefimehr

Position

Periodontist, 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