Clinical Trial Protocol
Iranian Registry of Clinical Trials

08 Nov 2026

Comparision of the clinical and microbiological effects of photodynamic therapy as an adjunctive treatment with scaling and root planning with scaling and root planning alone in aggressive periodontitis

Protocol summary

Summary

The aim of the present study was to compare the effects of photodynamic therapy as an adjunctive treatment with scaling and root planning with the scaling and root planning alone on clinical and microbiological parameters in patients with aggressive periodontitis. Inclusion and exclusion criteria: patients with aggressive periodontitis and no systemic disease were selected. Study population, sample size and primary outcome: Twenty eight patients with aggressive periodontitis as split mouth design and based on inclusion criteria were selected. In order to evaluate periodontal status, the clinical parameters of clinical attachment level as primary outcome, probing depth, gingival Index, Plaque Index and bleeding on probing were measured and recorded before treatment and at 3 month after treatment. Microbial parameters of the study, the quantitave level of Aa, were determined by special laboratory kits of real-time PCR at the same time.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201211277128N3**
Registration date: **2012-12-23, 1391/10/03**
Registration timing: **retrospective**

Last update:
Update count: **0**

Registration date

2012-12-23, 1391/10/03

Registrant information

Name

Adileh Shirmohammadi

Name of organization / entity

Tabriz University of Medical Sciences

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Recruitment status

Recruitment complete

Funding source

Tabriz University of Medical Science

Expected recruitment start date

2012-07-22, 1391/05/01

Expected recruitment end date

2012-11-21, 1391/09/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparision of the clinical and microbiological effects of photodynamic therapy as an adjunctive treatment with scaling and root planning with scaling and root planning alone in aggressive periodontitis

Public title

Comparision of the effect of photodynamic therapy associated with scaling and scaling alone in aggrissive gingival disease

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: A total of 28 patients; with an age range of 18-45 years, suffering from aggressive periodontitis; The subjects had at least 12 teeth and at

least 3 teeth in each quadrant and one tooth with CAL≥4mm in each quadrant. Exclusion criteria: systemic disease; conditions which delay would healing; a history of radiotherapy or immune-suppressive treatment modalities; pregnancy or breast-feeling; use of systemic antibiotics during the 6 previous months; history of scaling and root planning during the previous year.

Age
From **18 years** old to **45 years** old

Gender
Both

Phase
N/A

Groups that have been masked
No information

Sample size
Target sample size: **28**

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
Ethics committee of Tabriz University of Medical Science

Street address
Dentistry Faculty, Daneshgah St, Golgasht

City
Tabriz

Postal code
5566614711

Approval date
2012-10-20, 1391/07/29

Ethics committee reference number
91128

Health conditions studied

1

Description of health condition studied
aggresive periodontitis

ICD-10 code
K05.4 Peri

ICD-10 code description
Juvenile periodontosis

Primary outcomes

1

Description
Clinical attachment level (CAL)

Timepoint
baseline and 3 month later

Method of measurement
milimeter distance from CEJ to bottom of pocket with a periodontal probe

Secondary outcomes

1

Description
Probing Depth (PD)

Timepoint
baseline and 3 month later

Method of measurement
milimeter distance from gingival margin to botom of pocket

2

Description
bleeding on probing (BOP)

Timepoint
baseline and 3 month later

Method of measurement
presence or absence of bleeding 30 s after probing

3

Description
recession (REC)

Timepoint
baseline and 3 month later

Method of measurement
milimeter distance from CEJ to gingival margin

4

Description
Plaque Index (PI)

Timepoint
baseline and 3 month later

Method of measurement
Oleary Plaque Index

5

Description
Gingival Index(GI)

Timepoint
baseline and 3 month later

Method of measurement
Loe & Silness introduced it base on imflamation and ademe and redness and important object of it, is

bleeding

6

Description
quantitive measurment of Aa (Aggregatibacter actinomycetemcomitans)
Timepoint
baseline and 3 month later
Method of measurement
real time PCR by special laboratory kits of real-time PCR

Intervention groups

1

Description
control: scaling and rootplanning as full mouth approach in all quadrants
Category
Treatment - Other

2

Description
intervention: Scaling and root planning with photodynamic teraphy in the selected teeth with PD≥4mm after application of photosensitizer and then the irradition of the laser with wavelength 670-690 nm with energy of 75 mW/cm2 for 120 seconds
Category
Treatment - Other

Recruitment centers

1

Recruitment center
Name of recruitment center
Tabriz Dentistry faculty, Periodontics ward, Tabriz University of Medical Science
Full name of responsible person
Dr Adile Shirmohamadi
Street address
Daneshgah st, Golgasht
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Tabriz University of Medical Science
Full name of responsible person
Dr Reza Pourabbas
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Daneshgah st, Golgasht
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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
Tabriz 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

Person responsible for general inquiries

Contact
Name of organization / entity
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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