

Clinical Trial Protocol

Iranian Registry of Clinical Trials

09 Jun 2026

Effects of topical erythropoietin gel on non-surgical treatment of chronic periodontitis: a split mouth randomized clinical trial

Protocol summary

Summary

The purpose of this study is to evaluate effects of topical erythropoietin gel on nonsurgical treatment of chronic periodontitis. In this study 15 patients with chronic periodontitis which have 2 cross arch area with more than 5mm probing depth are choosed. After scaling and root planing(SRP) erythropoietin is applied in one side (test side) and placebo is applied in other side(control side).Before SRP, baseline examination and recording of all study parameters (gingival index(GI), bleeding index(BOP), plaque index (PI), probing depth (PD), clinical attachment level(CAL) is performed by UNC15 probe by a blinde examiner. Patients are treated with full mouth supra- and sub-gingival scaling and root planning, then two contralateral teeth in the similar anatomic regions (two canines, two premolars or two molars) were randomly assigned in test or control groups with coin toss method. EPO is applied in one side(test) and placebo in other side(control) for 5 times during the first 2 weeks. patient are asked not to use any mouthwash or antibiotics during the study period. After 3 monthes, clinical parameters are re-evaluated to evaluate effects of topical erythropoietin gel on non-surgical treatment of chronic periodontitis

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2017091636203N1**

Registration date: **2017-11-06, 1396/08/15**

Registration timing: **registered_while_recruiting**

Last update:

Update count: **0**

Registration date

2017-11-06, 1396/08/15

Registrant information

Name

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Name of organization / entity

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Recruitment status

Recruitment complete

Funding source

the study is funded by executive research team.

Expected recruitment start date

2017-09-16, 1396/06/25

Expected recruitment end date

2018-01-16, 1396/10/26

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effects of topical erythropoietin gel on non-surgical treatment of chronic periodontitis: a split mouth randomized clinical trial

Public title

Effects of topical erythropoietin gel on non-surgical treatment of chronic periodontitis

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: Age>18; No SRP during last 6 monthes; at least 2 cross arch teeth with more than 5mm probing depth. Exclusion criteria: Patients whit uncontrolled

systemic disease(diabetes mellitus, cancer,heart disease); Systemic antibiotics taken within previous 2 months; Enrollment in an other clinical trials; Current smokers; Patients with aggressive or narcotizing types of periodontitis.

Age

From **18 years** old to **90 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **15**

Randomization (investigator's opinion)

Randomized

Randomization description

Blinding (investigator's opinion)

Triple blinded

Blinding description

Placebo

Used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics Committee Of Dental School Of Tehran
University Of Medical Sciences

Street address

Dental School Of Tehran University Of Medical
Sciences, North Karegar Street ,Tehran

City

Tehran

Postal code

Approval date

2017-08-12, 1396/05/21

Ethics committee reference number

IR.TUMS.DENTISTRY.REC.1396.3139

Health conditions studied

1

Description of health condition studied

chronic periodontitis

ICD-10 code

k05.4

ICD-10 code description

chronic periodontitis

Primary outcomes

1

Description

Probing Depth

Timepoint

Before SRP and after months

Method of measurement

By UNC-15 probe

2

Description

Clinical Attachment Level

Timepoint

Before SRP and after3 months

Method of measurement

UNC-15 probe

3

Description

Bleeding On Probing

Timepoint

Before SRP and after monthes

Method of measurement

Sulcular bleeding index (muhleman)

4

Description

Gingival index

Timepoint

Before SRP and after3 months

Method of measurement

By observation. no inflammation=0 mild inflammation and color change which doesnt involve papilla=1, inflammation like group 1 which involves papilla=2 shine and redness and inflammation at margin or papilla=3

5

Description

Plaque Index

Timepoint

Before SRP and after3 months

Method of measurement

By moving prob on tooth surface, no plaque=0, plaque in cervical1/3 only recognizable by prob =1, plaque in cervical1/3 reconizable by abservation=2

Secondary outcomes

empty

Intervention groups

1

Description

In test group after measusing the parameters , SRP will be done.Then a complex of 1cc of EPO gel(4000IU) and 1

cc of carboxymethyl cellulose gel will be applied in the site for 5 times durin 2 weeks.

Category

Treatment - Drugs

2**Description**

In control group after measusing the parameters , SRP will be done.Then 2 cc of carboxymethyl cellulose gel will be applied in the site for 5 times durin 2 weeks.

Category

Treatment - Drugs

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

Dental School Of Tehran University Of Medical Sciences

Full name of responsible person**Street address**

Dental School Of Tehran University Of Medical Sciences, Karegar Street, Tehran

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

Research and Technology Department Of Tehran University Of Medical Science

Full name of responsible person

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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

Research and Technology Department Of Tehran 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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Fax**Email****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