

Clinical Trial Protocol

Iranian Registry of Clinical Trials

17 Sep 2026

Evaluation of root surface roughness produced by hand instruments and ultrasonic scalers in single root teeth: an in vivo study

Protocol summary

Study aim

Evaluation of root surface roughness produced by hand instruments and ultrasonic scalers: an in vivo study

Design

In this study 35 single roots (28 of them with periodontal problems) which had inclusion criteria are selected. Teeth are divided in to five groups (hand instrument, low power ultrasonic, medium power ultrasonic, high power ultrasonic and control groups). There are seven teeth in each groups which scaling and rootplaning are done with different instruments and surface roughness is assessed with AFM device.

Settings and conduct

Scaling and rootplaning is doing on 28 teeth with different instrument in In vivo condition and root surface roughness is assessed by AFM device .this study is doing in Shahid Sadoughi Faculty of Dentistry Yazd

Participants/Inclusion and exclusion criteria

Inclusion criteria: single root teeth, at least 70% bone loss and mobility grade II, without SRP history, without root surface with decay exclusion criteria: fracture during tooth extraction

Intervention groups

group1: scaling and rootplaning with gracey curettes No 1/2, 3/4, 5/6 group 2: scaling and rootplaning with a low power ultrasonic device group 3: scaling and rootplaning with a moderate power ultrasonic device group 4: scaling and rootplaning with a high power ultrasonic device group 5: control

Main outcome variables

root surface roughness(Rq) of each group

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20171015036782N3**

Registration date: **2018-03-18, 1396/12/27**

Registration timing: **retrospective**

Last update: **2018-03-18, 1396/12/27**

Update count: **0**

Registration date

2018-03-18, 1396/12/27

Registrant information

Name

farzane vaziri

Name of organization / entity

Shahid sadoughi dental university

Country

Iran (Islamic Republic of)

Phone

+98 35 3620 4764

Email address

f.vaziri@ssu.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2017-07-11, 1396/04/20

Expected recruitment end date

2017-08-11, 1396/05/20

Actual recruitment start date

2017-10-02, 1396/07/10

Actual recruitment end date

2017-11-01, 1396/08/10

Trial completion date

empty

Scientific title

Evaluation of root surface roughness produced by hand instruments and ultrasonic scalers in single root teeth: an in vivo study

Public title

Evaluation of root surface roughness produced by hand

instruments and ultrasonic scalers: an in vivo study

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

single root teeth at least 70% bone loss and mobility grade II without SRP history without root surface with decay

Exclusion criteria:

fracture during tooth extraction

Age

No age limit

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **35**

Actual sample size reached: **35**

Randomization (investigator's opinion)

Not randomized

Randomization description

Blinding (investigator's opinion)

Not 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 yazd University of Medical Sciences

Street address

No.304, A6, baharan apartment, bahar Ave, daneshgah Blv

City

yazd

Province

Yazd

Postal code

8915839985

Approval date

2017-04-10, 1396/01/21

Ethics committee reference number

IR.SSU.REC.1396.2

Health conditions studied

1

Description of health condition studied

root surface roughness

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description

root surface roughness

Timepoint

In study has no timepoint

Method of measurement

Atomic force microscope

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group: scaling and rootplaning with gracey curettes No 1/2, 3/4, 5/6 (Hu-Friedy)

Category

Treatment - Devices

2

Description

Intervention group: scaling and rootplaning with a low power ultrasonic device (woodpecker)

Category

Treatment - Devices

3

Description

Intervention group: scaling and rootplaning with a moderate power ultrasonic device (woodpecker)

Category

Treatment - Devices

4

Description

Intervention group: scaling and rootplaning with a high power ultrasonic device (woodpecker)

Category

Treatment - Devices

5

Description

Control group: No intervention

Category

Treatment - Devices

Recruitment centers

1

Recruitment center

Name of recruitment center

shahid sadoughi University of Medical Sciences

Full name of responsible person

Seyed Mohamad Arab Farashahi

Street address

Shahid Sadoughi Faculty of Dentistry Yazd, Emam
Reza square

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Email

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Yazd University of Medical Sciences

Full name of responsible person

Alireza Danesh Kazemi

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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

Yazd University of Medical Sciences

Proportion provided by this source

100

Public or private sector

Public

Domestic or foreign origin

Domestic

Category of foreign source of funding

empty

Country of origin**Type of organization providing the funding**

Academic

Person responsible for general inquiries

Contact

Name of organization / entity

Yazd University of Medical Sciences

Full name of responsible person

Seyed Mohamad Arab Farashahi

Position

post graduation

Latest degree

Medical doctor

Other areas of specialty/work

Dentistry

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Person responsible for scientific inquiries

Contact

Name of organization / entity

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Full name of responsible person

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Position

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Person responsible for updating data

Contact

Name of organization / entity

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Sharing plan**Deidentified Individual Participant Data Set (IPD)**

Yes - There is a plan to make this available

Study Protocol

Yes - There is a plan to make this available

Statistical Analysis Plan

Undecided - It is not yet known if there will be a plan to make this available

Informed Consent Form

Undecided - It is not yet known if there will be a plan to make this available

Clinical Study Report

Undecided - It is not yet known if there will be a plan to make this available

Analytic Code

Undecided - It is not yet known if there will be a plan to make this available

Data Dictionary

Undecided - It is not yet known if there will be a plan to make this available

Title and more details about the data/document

The whole data is shared

When the data will become available and for how long

Six months after the publication of the article

To whom data/document is available

Researchers working in academic institutions

Under which criteria data/document could be used

Email, call

From where data/document is obtainable

09133735190 Seyed Mohammad Arab Farashahi
sma.farashahi_69@yahoo.com

What processes are involved for a request to access data/document

After sending the Email, the data will be transmitted

Comments