

Clinical Trial Protocol

Iranian Registry of Clinical Trials

02 Jul 2026

The prophylactic effect of air-powder plashing versus robber-cap plashing on plaque removal & brackets debonding in orthodontic patients: a double blind randomized clinical trial

Protocol summary

Summary

Objectives: To assess the effect of air-powder plashing versus robber-cap plashing on plaque removal & brackets debonding in orthodontic patients. Design: a double blind randomized clinical trial. Setting and conduct: The eligible patients who underwent orthodontic procedure who will refer to Dr Poormoradi's private clinic during the study period will be enrolled into the trial. Inclusion criteria: (a) orthodontic procedure on both of the jaws; (b) plaque index equal to or greater than 30. Exclusion criteria: (a) having cardiovascular disease or hypertension; (b) contraindication of sodium use regiment; (c) having gum erosion. Intervention: Prophylactic treatment with air-powder plashing once. Control: Prophylactic treatment with robber-cap plashing once. Primary outcome: Measuring the plaque index of all teeth before and after the intervention using O'leary index. Secondary outcome: Measuring brackets debonding before and after the intervention through physical examination.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201506029014N65**

Registration date: **2015-06-06, 1394/03/16**

Registration timing: **registered_while_recruiting**

Last update:

Update count: **0**

Registration date

2015-06-06, 1394/03/16

Registrant information

Name

Jalal Poorolajal

Name of organization / entity

Department of Epidemiology & Biostatistics Hamadan University of Medical Sciences

Country

Iran (Islamic Republic of)

Phone

+98 81 1838 0090

Email address

poorolajal@umsha.ac.ir

Recruitment status

Recruitment complete

Funding source

Vice-chancellor for Research the Technology, Hamadan University of Medical Sciences

Expected recruitment start date

2014-12-29, 1393/10/08

Expected recruitment end date

2015-09-23, 1394/07/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The prophylactic effect of air-powder plashing versus robber-cap plashing on plaque removal & brackets debonding in orthodontic patients: a double blind randomized clinical trial

Public title

The prophylactic effect of air-powder plashing versus robber-cap plashing on plaque removal & brackets debonding in orthodontic patients

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: (a) orthodontic procedure on both of the jaws; (b) plaque index equal to or greater than 30. Exclusion criteria: (a) having cardiovascular disease or hypertension; (b) contraindication of sodium use regiment; (c) having gum erosion.

Age

No age limit

Gender

Both

Phase

2

Groups that have been masked

No information

Sample size

Target sample size: 50

Randomization (investigator's opinion)

Randomized

Randomization description**Blinding (investigator's opinion)**

Double blinded

Blinding description**Placebo**

Not used

Assignment

Parallel

Other design features

Randomization: Random assignment of the upper and lower jaws in every patient to the either of interventions one at a time. Blinding: Patients will be unaware of the type of intervention. The physician who will examine the patients will not be aware of the intervention. Therefore, the trial will be run as double blind.

Secondary Ids

empty

Ethics committees**1****Ethics committee****Name of ethics committee**

Research Ethic Committee of Hamadan University of Medical Sciences

Street address

Vice-chancellor of Research the Technology, Hamadan University of Medical Sciences, Shahid

City

Hamadan

Postal code

6517838695

Approval date

2015-01-20, 1393/10/30

Ethics committee reference number

D/P/16/35/9/4781

Health conditions studied**1****Description of health condition studied**

orthodontics

ICD-10 code

Z46.4

ICD-10 code description

Fitting and adjustment of orthodontic device

Primary outcomes**1****Description**

Measuring the plaque index of all teeth

Timepoint

before and after the intervention

Method of measurement

using O'leary index

Secondary outcomes**1****Description**

Measuring brackets debonding

Timepoint

before and after the intervention

Method of measurement

through physical examination

Intervention groups**1****Description**

Prophylactic treatment with air-powder plashing once

Category

Treatment - Other

2**Description**

Prophylactic treatment with robber-cap plashing once

Category

Treatment - Other

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

Dr Poormoradi's private clinic

Full name of responsible person

Dr Banafshe Poormoradi

Street address

Dr Poormoradi's private clinic, Buali Ave

City

Hamadan

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Vice-chancellor for Research the Technology,
Hamadan University of Medical Sciences

Full name of responsible person

Dr Saeid Bashirian

Street address

Hamadan University of Medical Sciences, Shahid
Fahmideh Ave

City

Hamadan

Grant name**Grant code / Reference number****Is the source of funding the same sponsor organization/entity?**

Yes

Title of funding source

Vice-chancellor for Research the Technology, Hamadan
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**

Dentistry School

Full name of responsible person

Faeze behgozin

Position

Faeze behgozin

Other areas of specialty/work**Street address**

Dentistry School, Shahid Fahmideh Ave.

City

Hamadan

Postal code**Phone**

+98 81 3838 1086

Fax**Email**

behgozin.faeze@gmail.com

Web page address

Person responsible for scientific inquiries

Contact**Name of organization / entity**

Dentistry School

Full name of responsible person

Dr Banafshe Poormoradi

Position

Peroidontist

Other areas of specialty/work**Street address**

Dentistry School, Shahid Fahmideh Ave.

City

Hamadan

Postal code**Phone**

+98 81 3838 1086

Fax**Email**

b.moradi@umsha.ac.ir

Web page address

Person responsible for updating data

Contact**Name of organization / entity**

Department of Epidemiology & Biostatistics

Full name of responsible person

Dr Jalal Poorolajal

Position

Associate Professor

Other areas of specialty/work**Street address**

School of Public Health, Hamadan University of
Medical Sciences, Shahid Fahmideh Ave

City

Hamadan

Postal code

6517838695

Phone

+98 81 3838 0090

Fax**Email**

poorolajal@umsha.ac.ir

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