

Clinical Trial Protocol

Iranian Registry of Clinical Trials

01 Jul 2026

Evaluation of the effect of applying air-particle abrasion on the retention of the upper complete denture

Protocol summary

Summary

1-Objectives: The aim of this study is to evaluate the effect of sandblasting the impression surface on the maxillary denture retention. 2-Design: Before and After Clinical trial (the patients are their control group as well), accidental sampling and uni-center trial. 15 patients are going to participate. 3-Setting and Conduct: Retention of the maxillary bases before and after air-abrasion for the same patients will be compared. 4-Participants including major eligibility criteria: Patients of the Department of Prosthodontics of the Shahed University for complete removable denture treatment that have no oral disease, mucosal undercuts and any history of allergy to dental materials. 5-Intervention: evaluating the effect of sandblasting the impression surface on the maxillary denture retention during complete denture fabrication. 6-Main outcome measure: increased retention of maxillary complete denture

General information

Acronym

-

IRCT registration information

IRCT registration number: **IRCT2015041921835N1**
Registration date: **2015-12-30, 1394/10/09**
Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2015-12-30, 1394/10/09

Registrant information

Name

Farnoosh Taghavi

Name of organization / entity

Shahed Dental School of Shahed University

Country

Iran (Islamic Republic of)

Phone

+98 21 8895 9210

Email address

f.taghavi@shahed.ac.ir

Recruitment status

Recruitment complete

Funding source

Vice Chancellor for Research, Shahed Dental School of Shahed University

Expected recruitment start date

2015-09-10, 1394/06/19

Expected recruitment end date

2015-11-10, 1394/08/19

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Evaluation of the effect of applying air-particle abrasion on the retention of the upper complete denture

Public title

Evaluation of the effect of applying air-particle abrasion on the retention of the upper complete denture

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: Patients of the Department of Prosthodontics of the Shahed University for complete removable denture treatment; No oral disease; No mucosal undercuts; No history of allergy to dental materials. Exclusion Criteria: Having Oral disease; Having mucosal undercuts in the upper jaw; History of allergy to dental materials

Age

From **30 years** old to **100 years** old

Gender

Both

Phase

2-3

Groups that have been masked

No information

Sample size

Target sample size: **15**

Randomization (investigator's opinion)

N/A

Randomization description

Blinding (investigator's opinion)

Not blinded

Blinding description

Placebo

Not used

Assignment

Other

Other design features

-

Secondary Ids

1

Registry name

-

Secondary trial Id

-

Registration date

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics Committee of Shahed University

Street address

No. 39, Italia Street, Vesal Street, Enghelab Street,
Tehran, Iran

City

Tehran

Postal code

Approval date

2015-11-15, 1394/08/24

Ethics committee reference number

Shahed.rec.1394.51

Health conditions studied

1

Description of health condition studied

The effect of sandblasting with airborne particles on the retention of complete maxillary denture

ICD-10 code

-

ICD-10 code description

-

Primary outcomes

1

Description

retention of the maxillary complete denture

Timepoint

before and immediately after the intervention(Sandblasting)

Method of measurement

Determining the force needed to dislodge the base from the patients' palate with digital force transducer

Secondary outcomes

1

Description

-

Timepoint

-

Method of measurement

-

Intervention groups

1

Description

Intervention group: Sandblasting the tissue surface of maxillary complete base Intervention: The internal surface of the bases will be air abraded by 50 micron Alumina particles for 1 minute except for the borders which will be covered by Aluminum thin foils.

Category

Other

Recruitment centers

1

Recruitment center

Name of recruitment center

Shahed Dental School

Full name of responsible person

Dr Farnoosh Taghavi

Street address

No. 39, Italia Street, Vesal Street, Enghelab Street,
Tehran, Iran

City

Tehran

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Vice Chancellor for Research of Shahed Dental School

of Shahed University

Full name of responsible person

Ms Gharajeh

Street address

No. 39, Italia Street, Vesal Street, Enghelab Street,
Tehran, Iran

City

Tehran

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 of Shahed Dental School of
Shahed University

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

Shahed Dental School

Full name of responsible person

Farnoosh Taghavi

Position

Resident of Prosthodontics

Other areas of specialty/work

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Person responsible for scientific inquiries

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Full name of responsible person

Farnoosh Taghavi

Position

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Person responsible for updating data

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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