

Clinical Trial Protocol

Iranian Registry of Clinical Trials

19 Jun 2026

Treatment of extensive peri-implant defects with titanium mesh

Protocol summary

Study aim

Evaluation of clinical and radiographic success of titanium mesh in the reconstruction of extensive peri-implant defects

Design

Pilot clinical trial on 10 patients

Settings and conduct

This protocol would be performed on patients who tend to maintain their implants despite the extensive peri-implant defects. All treatment conditions and the possibility of treatment failure are explained to the patients and after justifying the plan and announcing the cooperation agreement, written consent will be obtained from the patients. If implants are not in a correct position, the implants would be removed.

Participants/Inclusion and exclusion criteria

Patients with extensive peri-implant defects who have presented to the periodontics department of Shahid Beheshti Dental School for follow-up examinations

Intervention groups

In this technique, we would use a titanium mesh, a combination of autogenous bone and allogenic grafting material, and an acellular dermal matrix (ADM) to reconstruct peri-implant defects.

Main outcome variables

Marginal bone level; Probing depth; Bleeding on probing

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20190712044177N1**

Registration date: **2021-04-25, 1400/02/05**

Registration timing: **retrospective**

Last update: **2021-04-25, 1400/02/05**

Update count: **0**

Registration date

2021-04-25, 1400/02/05

Registrant information

Name

Mahdi Kadkhodazadeh

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 21 8803 2208

Email address

mahdi.sbmu@gmail.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2021-01-10, 1399/10/21

Expected recruitment end date

2021-03-18, 1399/12/28

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Treatment of extensive peri-implant defects with titanium mesh

Public title

Titanium mesh efficacy in peri-implantitis

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Patients with peri-implantitis (bone loss, increased probing depth compared to previous visits and BoP and/or pus; in the absence of previous data, defects with ≥ 3 mm depth, probing depth ≥ 6 mm, and bleeding on probing and/or pus) At least 30-50% Peri-implant bone loss

Exclusion criteria:

Smoking O'Leary plaque index > 20% Allergy to the material used in the study Pregnancy Uncontrolled peri-implantitis Parafunctional habits Systemic disease or intake of any medication

Age

No age limit

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: 10

Randomization (investigator's opinion)

N/A

Randomization description

Blinding (investigator's opinion)

Not blinded

Blinding description

Placebo

Not used

Assignment

Single

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics committee of Shahid Beheshti University of Medical Sciences

Street address

Daneshjoo Blv., Evin, Shahid Chamran Hwy

City

Tehran

Province

Tehran

Postal code

1983963113

Approval date

2021-03-03, 1399/12/13

Ethics committee reference number

IR.SBMU.DRC.REC.1399.121

Health conditions studied

1

Description of health condition studied

Peri-implantitis

ICD-10 code

M27.62

ICD-10 code description

Post-osseointegration biological failure of dental implant

Primary outcomes

1

Description

Radiographic defect fill

Timepoint

Eight months following surgery

Method of measurement

Measurement using a digital software considering the implant dimension for calibration

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group: The patients had at least one titanium implant with peri-implantitis with a pocket probing depth (PD) \geq 6 mm, positive bleeding and/or pus on probing, and peri-implant bone loss > 30% of the implant length. Affected implants with at least 2 years of functional loading were included in this study. The defects will be reconstructed using titanium mesh, autogenous and allogeneic bone graft, along with acellular dermal matrix.

Category

Treatment - Surgery

Recruitment centers

1

Recruitment center

Name of recruitment center

School of Dentistry, Shahid Beheshti University of Medical Sciences

Full name of responsible person

Mahdi Kadkhodazadeh

Street address

Daneshjoo Blvd, Evin, Shahid Chamran Highway

City

Tehran

Province

Tehran

Postal code

1983963113

Phone

+98 21 2240 3075

Email

Intl_office@sbmu.ac.ir

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Shahid Beheshti University of Medical Sciences

Full name of responsible person

Afshin Zarghi

Street address

Daneshjoo Blvd, Evin, Shahid Chamran Highway

City

Tehran

Province

Tehran

Postal code

1983963113

Phone

+98 21 2240 3075

Email

Intl_office@sbmu.ac.ir

Grant name

Grant code / Reference number

Is the source of funding the same sponsor organization/entity?

Yes

Title of funding source

Shahid Beheshti 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

Shahid Beheshti University of Medical Sciences

Full name of responsible person

Mahdi Kadkhodazadeh

Position

Professor

Latest degree

Specialist

Other areas of specialty/work

Dentistry

Street address

Daneshjoo Blvd, Evin, Shahid Chamran Highway

City

Tehran

Province

Tehran

Postal code

1983963113

Phone

+98 21 2240 3075

Email

mahdi.sbmu@gmail.com

Person responsible for scientific inquiries

Contact

Name of organization / entity

Shahid Beheshti University of Medical Sciences

Full name of responsible person

Mahdi Kadkhodazadeh

Position

Professor

Latest degree

Specialist

Other areas of specialty/work

Dentistry

Street address

Daneshjoo Blvd, Evin, Shahid Chamran Highway

City

Tehran

Province

Tehran

Postal code

1983963113

Phone

+98 21 2240 3075

Fax

Email

Mahdi.sbmu@gmail.com

Person responsible for updating data

Contact

Name of organization / entity

Shahid Beheshti University of Medical Sciences

Full name of responsible person

Mahdi Kadkhodazadeh

Position

Professor

Latest degree

Specialist

Other areas of specialty/work

Dentistry

Street address

Daneshjoo Blvd, Evin, Shahid Chamran Highway

City

Tehran

Province

Tehran

Postal code

1983963113

Phone

+98 21 2240 3075

Email

mahdi.sbmu@gmail.com

Sharing plan

Deidentified Individual Participant Data Set (IPD)

No - There is not a plan to make this available

Justification/reason for indecision/not sharing IPD

There is no more information.

Study Protocol

No - There is not a plan to make this available

Statistical Analysis Plan

No - There is not a plan to make this available

Informed Consent Form

No - There is not a plan to make this available

Clinical Study Report

No - There is not a plan to make this available

Analytic Code

No - There is not a plan to make this available

Data Dictionary

No - There is not a plan to make this available