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 and 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
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Iran (Islamic Republic of)
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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 bon 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) ≥ 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
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity

Shahid Beheshti University of Medical Sciences

Full name of responsible person
Afshin Zarghi

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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
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

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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