Clinical Trial Protocol
Iranian Registry of Clinical Trials

17 Sep 2026

Comparison of Cenobone biomaterials with Matchstick on the preservation of alveolar ridge and soft tissue after tooth extraction

Protocol summary

Study aim

The purpose of this study is to compare the effect of Cenobone with Matchstick in preserving the alveolar ridge and soft tissue after tooth extraction, which has not been studied in this regard so far.

Design

Patients will be double-blind and divided into 3 groups. The first group consists of 13 people who are filled with Cenobone in silence. The second group consists of 13 people who we put inside the Matchstick tooth silencer. The third group also includes 13 people, considered the control group, and we put it inside the Collacone silence alone. The study will be conducted in a double-blind manner and each patient will be randomly assigned to one of the groups using sealed envelopes.

Settings and conduct

Department of Periodontology, Jundi Shapur Faculty of Dentistry, Ahvaz

Participants/Inclusion and exclusion criteria

Entry requirements: The tooth is unmaintainable and a candidate for extraction Age group 18 to 60 years non-smoker The thickness of the buccal wall should be less than 2 mm. All silent walls are healthy Systemically healthy not pregnant Non-entry conditions: The tooth has a periapical lesion Taking drugs that affect bone metabolism, such as bisphosphonates Have uncontrolled diabetes or high blood pressure The buccal wall should have a sensation or perforation

Intervention groups

The first group consists of 13 people who are filled with Cenobone in silence. The second group consists of 13 people who we put inside the Matchstick tooth silencer. The third group also includes 13 people, which is considered as the control group, and we put it inside the Collacone silence alone.

Main outcome variables

Ridge restoration material No. 1 (cenobone) Ridge restoration material No. 2 (matchstick) The alveolar ridge buccolingual dimension from a clinical point of view Clinical ridge height Soft tissue dimensions

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20221124056599N1**
Registration date: **2023-04-18, 1402/01/29**
Registration timing: **retrospective**

Last update: **2023-04-18, 1402/01/29**
Update count: **0**

Registration date

2023-04-18, 1402/01/29

Registrant information

Name
Farzane Mehranfar
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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2023-01-20, 1401/10/30

Expected recruitment end date

2023-03-21, 1402/01/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title
Comparison of Cenobone biomaterials with Matchstick on the preservation of alveolar ridge and soft tissue after tooth extraction

Public title
Comparison of Cenobone biomaterials with Matchstick on the preservation of alveolar ridge and soft tissue after tooth extraction

Purpose
Treatment

Inclusion/Exclusion criteria
Inclusion criteria:
The tooth is unmaintainable and a candidate for extraction (due to severe caries, root fracture, failure of root treatment) Age group 18 to 60 years non-smoker The thickness of the buccal wall should be less than 2 mm. All walls are healthy Systemically healthy.
Exclusion criteria:
The tooth has a peri apical lesion. Taking drugs that affect bone metabolism like bisphosphonates have a uncontrolled diabetes or high blood pressure the buccal wall have a fenestration or dehiscence pregnancy

Age
From **18 years** old to **60 years** old

Gender
Both

Phase
N/A

Groups that have been masked

- Participant
- Care provider
- Outcome assessor
- Data analyser
- Data and Safety Monitoring Board

Sample size
Target sample size: **39**

Randomization (investigator's opinion)
Randomized

Randomization description
In order to randomize from the design of random blocks of three that become six states, we randomly select a block of three from one to six, and according to the sample size, thirteen blocks are selected and selected based on the material desired by each person.

Blinding (investigator's opinion)
Double blinded

Blinding description
39 of the same color and size envelopes are prepared and a code is written inside each envelope that belongs to one of the groups and one of the envelopes is randomly selected for each patient. A way that only the surgeon will be aware of the type of substance consumed for each group, and the participants, those responsible for data collection, and the person who evaluates the outcome are not aware of the type of substance consumed.

Placebo
Used

Assignment
Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Jundishapur University of Medical Sciences, Ahvaz
Street address
Kian Abad, West 19th St., No. 88
City
ahvaz
Province
Khouzestan
Postal code
6155749845

Approval date
2022-11-15, 1401/08/24

Ethics committee reference number
IR.AJUMS.REC.1401.345

Health conditions studied

1

Description of health condition studied
Measurement of alveolar ridge buccolingual dimension from a clinical point of view Measurement of the clinical height of the ridge Measurement of soft tissue dimensions

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description
Reduction of bone and soft tissue resorption

Timepoint
4months later

Method of measurement
Before tooth extraction, an alginate mold will be taken and a diagnostic cast will be prepared. A template (stent) will be made on the occlusal surface of the candidate tooth and at least one more anterior and posterior tooth on the study cast with self-curing acrylic. This stent allows the measurement of alveolar ridge bone to be repeated at two different times, one immediately after tooth extraction and the other 4 months after keeping silent. Alveolar crest height is measured with a periodontal probe from inside the stent to the middle part of the buccal crest wall. We create an indentation in the stent to guide the same position and angle of entry of the probe when it is used a second time. The

buccolingual ridge width is also measured by the periodontal probe from midbuccal/midlabial to midlingual/midpalatal.

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group: The first intervention group: Ridge restoration material No. 1 (cenobone), the second intervention group: Ridge restoration material No. 2 (matchstic)
Category
Prevention

Recruitment centers

1

Recruitment center
Name of recruitment center
In the periodontology and surgery department of Jundishapur Dental School, Ahvaz
Full name of responsible person
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
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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
Ahvaz 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
Ahvaz University of Medical Sciences
Full name of responsible person
Farzaneh Mehranfar
Position
Periodontics Resident
Latest degree
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Other areas of specialty/work
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Latest degree

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Sharing plan

Deidentified Individual Participant Data Set (IPD)

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

Study Protocol

Undecided - It is not yet known if there will be 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