Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Radiographic comparison of density and height of posterior of maxillary bone after use of open sinus lift with and without PRF

Protocol summary

Study aim
The purpose of this study was to evaluate the effect of PRF on bone height and bone density formed in sinus lift surgery and simultaneous insertion of dental implants.

Design
Clinical trial with blinded postoperative care and outcome assessment, split mouth

Settings and conduct
In this study, 14 patients were selected in 30-80 age with bilaterally partial or complete edentulous that referred to Dental School of Tabriz for sinus lift surgery and after receiving the written consent will enter to this study. Patients will be treated with Lateral window sinus lift technique.

Participants/Inclusion and exclusion criteria
Inclusion criteria: The existence of bilaterally partial edentulous or complete edentulous in maxillary posterior region. Height of the remaining bone between the floor of sinus and alveolar crest be more than 4mm and less than 8 mm. Exclusion criteria: Smokers-pregnant women- pathological symptoms or cystic lesions in the sinus- acute and chronic inflammatory disease of sinus- benign and malignant tumors in sinus-systemic diseases such as uncontrolled diabetes- cardiovascular diseases - cancer- head and neck radiotherapy- autoimmune diseases that makes trouble, healing of soft and hard tissue- taking steroidal drugs, immune system suppression and bisphosphonates- the existence of untreated periodontal disease and priapical disease, especially in the adjacent teeth of sinus floor.

Intervention groups
The sinus floor of test group will be augmented with lateral window sinus lift surgical technique with using PFR and simultaneously implantation and in the control group, this process will be done without using the PRF.

Main outcome variables
Evaluation density and height of newly formed bone in the maxillary sinus by using of CBCT.

General information

Reason for update

Acronym
PRF (Platelet Rich Fibrin)

IRCT registration information
IRCT registration number: **IRCT20120702010155N4**
Registration date: **2018-03-29, 1397/01/09**
Registration timing: **registered_while_recruiting**

Last update: **2018-03-29, 1397/01/09**
Update count: **0**

Registration date
2018-03-29, 1397/01/09

Registrant information

Name
Mohammad Taghi Chitsazi

Name of organization / entity

Country
Iran (Islamic Republic of)

Phone
+98 41 1335 5965

Email address
chitsazm@tbzmed.ac.ir

Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2018-03-01, 1396/12/10

Expected recruitment end date
2018-04-30, 1397/02/10

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title
Radiographic comparison of density and height of posterior of maxillary bone after use of open sinus lift with and without PRF

Public title
Effect of PRF on bone density

Purpose
Treatment

Inclusion/Exclusion criteria

Inclusion criteria:
The existence of bilaterally partial edentulous or complete edentulous in maxillary posterior region Height of the remaining bone between the floor of sinus and alveolar crest be more than 4 mm and less than 8 mm

Exclusion criteria:
Smokers- Pregnant women- Pathological symptoms or cystic lesions in the sinus - Acute and chronic inflammatory disease of sinus- Benign and malignant tumors in sinus- Systemic diseases such as uncontrolled diabetes- Cardiovascular diseases- Cancer- Head and neck radiotherapy- Autoimmune diseases that makes trouble, healing of soft and hard tissue- Taking steroidal drugs, immune system suppression and bisphosphonates- The existence of untreated periodontal disease and priapical disease, especially in the adjacent teeth of sinus floor.

Age
From **30 years** old to **80 years** old

Gender
Both

Phase
N/A

Groups that have been masked

- Outcome assessor
- Data analyser

Sample size
Target sample size: **14**
More than 1 sample in each individual
Number of samples in each individual: **2**
In each patient, one side of the sinus was considered as the test group and the other side was considered as the control group.

Randomization (investigator's opinion)
Not randomized

Randomization description

Blinding (investigator's opinion)
Single blinded

Blinding description
In this study, the patient and the investigator are aware of the study groups but a person who will evaluate the results of sinus graft surgery through CBCT radiography and the person who will analyze the results , there are no information from test and control groups.

Placebo
Not used

Assignment
Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
Ethics Committe of Tabriz University of Medical Sciences

Street address
Ethics Committe of Tabriz University of Medical Sciences, Vice Chancllor for Research of Tabriz University of Medical Sciences, Tabriz University of Medical Sciences, Golghasht street,Tabriz

City
Tabriz

Province
East Azarbaijan

Postal code
5166614713

Approval date
2018-02-26, 1396/12/07

Ethics committee reference number
IR.TBZMED.REC.1396.1141

Health conditions studied

1

Description of health condition studied
Resorption of alveolar ridge in the maxillary posterior region

ICD-10 code
K08.2

ICD-10 code description
Atrophy of edentulous alveolar ridge

Primary outcomes

1

Description
Evaluation density and height of the newly formed bone.

Timepoint
4 months after surgery

Method of measurement
By CBCT and NNT viewer software version21

Secondary outcomes

empty

Intervention groups

1

Description
The sinus floor of intervention group will be augmented with lateral window sinus lift technique and using PFR

and simultaneously implantation.

Category

Treatment - Surgery

2

Description

The sinus floor of control group will be augmented with lateral window sinus lift technique without PRF and simultaneously implantation.

Category

Treatment - Surgery

Recruitment centers

1

Recruitment center

Name of recruitment center

Faculty of Dentistry, Tabriz University of Medical Sciences

Full name of responsible person

Mohammad Taghi Chitsazi

Street address

Dental Faculty of Tabriz University of Medical Sciences, Golghasht street, Tabriz

City

Tabriz

Province

East Azarbaijan

Postal code

5166614711

Phone

+98 41 3335 5968

Email

chitsazm@tbzmed.ac.ir

Web page address

http://dentistryfac.tbzmed.ac.ir

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Gingival and Dental Research Center of Tabriz Faculty of Dentistry

Full name of responsible person

Dr Shahriar Shahi

Street address

Faculty of Dentistry, Tabriz University of Medical Sciences, Golgasht Street, Tabriz

City

Tabriz

Province

East Azarbaijan

Postal code

5166614711

Phone

+98 41 3335 5968

Email

chitsazm@tbzmed.ac.ir

Grant name

Grant code / Reference number

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

Yes

Title of funding source

Gingival and Dental Research Center of Tabriz Faculty of Dentistry

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

Tabriz University of Medical Sciences

Full name of responsible person

Hadi Kokabi Arasteh

Position

Resident of Periodontics

Latest degree

Medical doctor

Other areas of specialty/work

Dentistry

Street address

Department of Periodontics., Dental Faculty., Tabriz University of Medical Sciences., Golghasht street

City

Tabriz

Province

East Azarbaijan

Postal code

5166614711

Phone

+98 41 3335 5968

Fax

Email

kokabih@tbzmed.ac.ir

Person responsible for scientific inquiries

Contact

Name of organization / entity

Tabriz University of Medical Sciences

Full name of responsible person

Mohammad Taghi Chitsazi

Position

Professor

Latest degree

Master

Other areas of specialty/work

periodontology

Street address
Department of Periodontics., Dental Faculty., Tabriz University of Medical Sciences., Golghasht street
City
Tabriz
Province
East Azarbaijan
Postal code
5166614711
Phone
+98 41 3335 5965
Fax
Email
chitsazm@tbzmed.ac.ir

Person responsible for updating data

Contact
Name of organization / entity
Tabriz University of Medical Sciences
Full name of responsible person
Hadi Kokabi Arasteh
Position
Resident of Periodontics
Latest degree
Medical doctor
Other areas of specialty/work
Dentistry
Street address
Department of Periodontics., Dental Faculty., Tabriz University of Medical Sciences., Golghasht street
City
Tabriz
Province
East Azarbaijan
Postal code
5166614711
Phone
+98 41 3335 5968
Fax
Email
kokabih@tbzmed.ac.ir

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