Clinical Trial Protocol
Iranian Registry of Clinical Trials

09 Jun 2026

Effect of platelet rich plasma (PRP) on the quantity of the osteogenesis after the removal of odontogenic cysts

Protocol summary

Study aim
Efficacy of platelet-rich plasma in bone regeneration after surgical removal of odontogenic cycts

Design
Patients with odontogenic cysts will be divided into two groups of experimental and control. Fifty-four milliliters of whole blood with citrate-phosphate-dextrose will be drawn into a sterile tube and will centrifuge for 12 minutes at 3200 rpm and 5600 rpm Platelet Concentration System. The experimental group will receive a platelet-rich plasma at the site of the lesion, and the control group will receive no platelet-rich plasma. Patients in both groups will be followed up for 4 months to compare the osteogenesis at the site of the lesion.

Settings and conduct
26 patients will be selected from dental clinic of Tabriz University and private clinic of executive researcher, consecutively. Double-blind method will be used to blind patients and researchers. For this, digital codes produced by a computer will be used to hide the real identity of the patients.

Participants/Inclusion and exclusion criteria
Patients with no history of previous surgery in the site; Patients with no history of systemic disease; being free of any infection and inflammation; Patients who involve in controlling visits on regular basis.

Intervention groups
The experimental group will receive a platelet-rich plasma at the site of the lesion. The control group will receive no platelets-rich plasma

Main outcome variables
Defect diameter befor and after surgery for ossification rate; Evaluation time; Gery level histogram of defect for bone density

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20171108037316N1**
Registration date: **2018-01-12, 1396/10/22**
Registration timing: **retrospective**

Last update: **2018-01-12, 1396/10/22**
Update count: **0**

Registration date
2018-01-12, 1396/10/22

Registrant information

Name
reza khorshidi

Name of organization / entity
tabriz medical science university

Country
Iran (Islamic Republic of)

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+98 413355966

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khorshidir@tbzmed.ac.ir

Recruitment status
Recruitment complete

Funding source
Tabriz University of Medical Sciences

Expected recruitment start date
2015-10-23, 1394/08/01

Expected recruitment end date
2016-03-19, 1394/12/29

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title
Effect of platelet rich plasma (PRP) on the quantity of the

osteogenesis after the removal of odontogenic cysts

Public title
Effect of platelet rich plasma on osteogenesis
Purpose
Treatment
Inclusion/Exclusion criteria
Inclusion criteria:
Patients with no history of previous surgery in the site. Patients with no history of systemic conditions, and being infection and inflammation free. Patients who involve in controlling visits on regular basis.
Exclusion criteria:
Age
From **24 years** old to **40 years** old
Gender
Both

Phase
2-3
Groups that have been masked

- Participant
- Investigator

Sample size
Target sample size: **26**
Randomization (investigator's opinion)
Randomized
Randomization description
Simple randomization is used to randomize patients into control and experiment groups. To do this, random number table is used to produce disorganized numbers in order to assign patients to one of the groups. Reading method is up to down. Odds and even numbers are assigned to patients in control and experiment groups, respectively. For allocation concealment, due to patients selection from two sites, central randomization is used to prevent acknowledgement about groups before patients’s assignment.
Blinding (investigator's opinion)
Double blinded
Blinding description
Double-blind method will be used to blind patients and researchers. Also, health stuffs will not be aware of classification of patients. For this, digital codes produced by a computer will be used to hide the real identity of the patients.
Placebo
Not used
Assignment
Parallel
Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Ethics committee of Tabriz Faculty of Dentistry
Street address
Ethics committee of Tabriz Faculty of Dentistry, Central Organization No. 2, Tabriz University of Medical Sciences, University Main St., Golgasht St, Azadi St.
City
Tabriz
Province
East Azarbaijan
Postal code
5166614766
Approval date
2016-12-20, 1395/09/30
Ethics committee reference number
IR.TBZMED.REC.1395.995

Health conditions studied

1

Description of health condition studied
Odontogenic cysts
ICD-10 code
k09.0
ICD-10 code description
Developmental odontogenic cysts

Primary outcomes

1

Description
Ossification rate
Timepoint
Postsurgical, 1 month after surgery, 2.5 months after surgery, 4 months after surgery.
Method of measurement
Using Cone beam computed tomography.

Secondary outcomes

1

Description
Bone density increase
Timepoint
Postsurgical, 1 month after surgery, 2.5 months after surgery, 4 months after surgery
Method of measurement
Using cone beam computed tomography.

Intervention groups

1

Description
Intervention group: Odontogenic cyst enucleation and PRP injection to the site.45 milliliters of whole blood with Citrate-phosphate-dextrose is drawn into a sterile tube and centrifuged for 12 minutes at 2400 rpm and 5600

rpm for PRP preparation then is injected to the surgical site.

Category

Treatment - Surgery

2

Description

Control group: Odontogenic cyst enucleation without PRP injection to the site

Category

Treatment - Surgery

Recruitment centers

1

Recruitment center

Name of recruitment center

Dentistry Clinic of Tabriz University of Medical Sciences

Full name of responsible person

Dr. Reza Khorshidi

Street address

Dentistry Clinic of Tabriz University of Medical Sciences, Tabriz Faculty of Dentistry, University Main St., Golgasht St., Azadi St.

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khorshidir@tbzmed.ac.ir

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Deputy of Research of Tabriz University of Medical Sciences

Full name of responsible person

Dr. Reza Khorshidi

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Deputy of Research, Tabriz University of Medical Sciences, University Main St., Golgasht St., Azadi St.

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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

Deputy of Research of Tabriz 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

Tabriz University of Medical Sciences

Full name of responsible person

Faranak Vakili

Position

Dentistry student

Latest degree

Medical doctor

Other areas of specialty/work

Dentistry

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Person responsible for scientific inquiries

Contact

Name of organization / entity

Tabriz University of Medical Sciences

Full name of responsible person

Dr. Reza Khorshidi

Position

Oral and maxillofacial surgeon

Latest degree

Specialist

Other areas of specialty/work

Dentistry

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Web page address

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