

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

Evaluation of post-op complications of two different flap designs for impacted third mandibular molar surgery

Protocol summary

Study aim

Determining the flap design (between envelope flap and comma flap) which has the least post-op complications such as : pain, edema, trismus, wound dehiscence, any alteration in lingual nerver sensation and alveolar osteitis

Design

Clinical trial with control group, single blinded, split mouth, randomized, on 25 patients (50 patients overall), for randomizing coin flipping is used.

Settings and conduct

On patients whom selected in oral and maxillofacial section of Islamic Azad university of Tabriz two flaps will be designed. comma flap: starting from a point at the depth of stretched vestibular reflection, posterior to the 2nd molar distal aspect, the incision is made anteriorly, to a point below the second molar, from where it smoothly curved up to the gingival crest at the 2nd molar distobuccal line angle. it is continued as a crevicular incision around the distal aspect of the 2nd molar. envelope flap: an incision from external oblique ridge of mandible to 2nd molar middistobuccal line angle will be made. additionally a sulcular incision on 2nd molar distofacial line angle will be made and continued up to 1st molar mesiofacial line angle.

Participants/Inclusion and exclusion criteria

Among patients who admitted in oral and maxillofacial section of Islamic Azad university of Tabriz, faculty of dentistry; 25 patients will be chosen who have bilateral and symmetrical impacted mandibular third molar. based on Pell and Gregory classification, class1,2, A, B tooth will be included. patients with any systemic disease or underlying disease and acute periodontal diseases and those with tooth on class 3,C Pell and Gregory classification will be excluded.

Intervention groups

Comma flap for case group (group A) and envelope flap for control group (group B) will be used

Main outcome variables

Pain; edema; trismus; flap design; wound dehiscence;

alveolar osteitis; alteration in lingual nerve sensation

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20230202057309N1**

Registration date: **2023-03-16, 1401/12/25**

Registration timing: **prospective**

Last update: **2023-03-16, 1401/12/25**

Update count: **0**

Registration date

2023-03-16, 1401/12/25

Registrant information

Name

Farid Ghasemi

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 31 3651 6267

Email address

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2023-04-21, 1402/02/01

Expected recruitment end date

2023-08-22, 1402/05/31

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Evaluation of post-op complications of two different flap designs for impacted third mandibular molar surgery

Public title

Evaluation of post-op complications of envelope flap and comma flap for impacted third molar

Purpose

Supportive

Inclusion/Exclusion criteria

Inclusion criteria:

Patients who have bilateral and symmetrical impacted mandibular third molar Patients who have class 1,2,A,B impacted mandibular third molar, based on Pell and Gregory classification Patients who have not any systemic or underlying disease Patients whom impacted mandibular third molar has no symptom such as pain, edema and trismus Patients whom root of impacted mandibular third molar has developed more than one-third Patients who have no acute periodontal disease

Exclusion criteria:

Age

No age limit

Gender

Both

Phase

N/A

Groups that have been masked

- Participant

Sample size

Target sample size: **25**

More than 1 sample in each individual

Number of samples in each individual: **2**

Patients with bilateral and symmetrically impacted mandibular third molar teeth.

Randomization (investigator's opinion)

Randomized

Randomization description

The impacted tooth will assigned into two lingually based comma flap(group A) and envelope flap(group B), by flipping a coin. For choosing which quadrant to start with, also there will be a coin flipping.

Blinding (investigator's opinion)

Single blinded

Blinding description

It will be explained to the patients that one distinct flap design will be used for every impacted mandibular third molar on each quadrant. But they will be not informed, which one of those two flap designs will be used on which quadrant.

Placebo

Not used

Assignment

Crossover

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics committee of Islamic Azad University Tabriz branch

Street address

Tabriz Islamic Azad Medical University, Jadde Basmanj, East Azerbaijan Province, Iran

City

Tabriz

Province

East Azarbaijan

Postal code

5159115705

Approval date

2023-03-07, 1401/12/16

Ethics committee reference number

IR.IAU.TABRIZ.REC.1401.332

Health conditions studied

1

Description of health condition studied

Post-op complications comparison of two comma and envelope flap design in impacted third mandibular surgery

ICD-10 code

K01.1

ICD-10 code description

Impacted teeth

Primary outcomes

1

Description

Pain: post-operative pain will be measured by Visual Analog Scale. In this scale, the patients will be asked to show the intensity of the pain which is experienced by choosing a number(between 0-10) on a horizontal line. Pain in this descriptive scale is categorized to 6 levels: 0= no pain, 1-3= mild pain, 4-5= moderate pain, 6-7= painful, 7-8= sever pain and 10= unbearable pain. The patients will be asked to report the pain score on its worst severity time on a day.

Timepoint

Will be measured on the first, third and seventh post-operative day.

Method of measurement

Visual Analog Scale

2

Description

Edema: the severity of post-operative edema will be measured by the pre-operative difference between the two fixed mandibular angle and lip commissure points on the patients' face and the post-operative one.

Timepoint

Will be measured on the first, third and seventh post-operative day.

Method of measurement

The pre-operative difference between the two fixed mandibular angle and lip commissure points on the patients' face and the post-operative one (in millimeter)

3

Description

Trismus: will be measured post-operatively. for this purpose the inter-incisal distance will be measured. if the distance is less than 25 millimeter, the presence of trismus will be considered.

Timepoint

Will be measured on the first, third and seventh post-operative day.

Method of measurement

the maximum inter-incisal distance (in millimeter).

4

Description

Wound dehiscence: to a dehiscence more than 1.5 centimeter square, number 3, less than 1 centimeter square, number 2 and less than 0.5 centimeter square, number 1 will be assigned. in case of no dehiscence number 0 will be considered.

Timepoint

Will be measured on the first, third and seventh post-operative day.

Method of measurement

the amount of post-operative wound dehiscence (in centimeter square).

5

Description

Alveolar osteitis: will be considered post-operative pain in or around the socket of the extracted impacted tooth or partial/total loss of the blood clot in the socket (yes or no).

Timepoint

Will be measured on the first, third and seventh post-operative day.

Method of measurement

post-operative pain in or around the socket of the extracted impacted tooth or partial/total loss of the blood clot in the socket (yes or no).

6

Description

Lingual nerve paraesthesia: in order to evaluate any post-operative injury or paraesthesia to lingual nerve, changes on the lateral surface of tongue will be investigated.

Timepoint

Will be measured on the first, third and seventh post-operative day.

Method of measurement

any post-operative injury, paraesthesia or anaesthesia on

the lateral surface of tongue (any changes in sensation, yes and no changes in sensation, no).

Secondary outcomes

empty

Intervention groups

1

Description

Control group: The impacted tooth will assigned into two lingually based comma flap (group A) and envelope flap (group B), by flipping a coin. For choosing which quadrant to start with, also there will be a coin flipping.

Category

Treatment - Surgery

2

Description

Intervention group: The impacted tooth will assigned into two lingually based comma flap (group A) and envelope flap (group B), by flipping a coin. For choosing which quadrant to start with, also there will be a coin flipping.

Category

Treatment - Surgery

Recruitment centers

1

Recruitment center

Name of recruitment center

oral and maxillofacial section of Islamic Azad university of Tabriz, faculty of dentistry

Full name of responsible person

Dr. Yousef Kananizadeh

Street address

Tabriz Islamic Azad Medical University, Jadde Basmanj, East Azerbaijan Province, Iran

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Islamic Azad University

Full name of responsible person

Dr. Yousef Kananizadeh

Street address

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Basmanj, East Azerbaijan Province, Iran

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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

Islamic Azad University

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**

Islamic Azad University

Full name of responsible person

Farid Ghasemi

Position

Student

Latest degree

Medical doctor

Other areas of specialty/work

Dentistry

Street address

No. 76, Ladan alley, Farabi 6 street, Tohid Sharghi
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Person responsible for scientific inquiries**Contact****Name of organization / entity**

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Full name of responsible person

Farid Ghasemi

Position

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Person responsible for updating data**Contact****Name of organization / entity**

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Sharing plan**Deidentified Individual Participant Data Set (IPD)**

Yes - There is a plan to make this available

Study Protocol

Yes - There is a plan to make this available

Statistical Analysis Plan

Yes - There is a plan to make this available

Informed Consent Form

Yes - There is a plan to make this available

Clinical Study Report

Yes - There is a plan to make this available

Analytic Code

Yes - There is a plan to make this available

Data Dictionary

Yes - There is a plan to make this available

Title and more details about the data/document

all of the patients' data except their name and contact information, will be shared.

When the data will become available and for how long

6 months after publishing of the results.

To whom data/document is available

People who practice in medical field, like medical doctors and dentists.

Under which criteria data/document could be used

Access permit to data will only be allowed in case of evaluating the exactitude of the study and using its benefits for treating patients.

From where data/document is obtainable

1) Farid Ghasemi f.gh1372@gmail.com (+98)9134728100 Skype: f.gh1372 2) Yousef Kananizadeh dr.kananizadehy@gmail.com

What processes are involved for a request to access data/document

Please contact with one of the two person mentioned, by e-mail or phone. after evaluating the request, in 2 weeks the data will be sent.

Comments