

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

Comparison of Sling and Single interrupted suture on post-operation complications after extraction of impacted mandibular third molars

Protocol summary

Summary

The aim of this study is to compare the effect of Sling and Single interrupted suture on pain, swelling, trismus, dehiscence, probing pocket depth & clinical attachment loss of adjacent second molars after extraction of impacted & semi-impacted mandibular third molars. The study design is randomized clinical trial in a parallel method. The included population is 18 patients who candidates for surgical extraction of mandibular third molars with bilaterally identical level of impaction. Patients with bilaterally different level of impaction & tissue coverage patients with systemic disease or any inflammation and periodontal disease will be excluded from the study. The sample size will be 36 bilateral surgical extractions in two suture group (each group 18 surgery). Bilateral operation will be done under local anesthesia by the same surgeon to prepare the triangular flap and minimum ostectomy in both sides. After removal of the tooth, the distal surface of the flap will be closed with sling suture technique in one side (group1) and single interrupted suture technique in the other side (group2). Suture technique for each side will be randomized & patients will be unaware. All patients will do same postoperative instruction. Clinical examination will be evaluated immediate, 2, 7& 14 days after operation. Probing pocket depth & clinical attachment level will be recorded after 22 weeks by one student.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2017100436551N1**

Registration date: **2017-11-11, 1396/08/20**

Registration timing: **registered_while_recruiting**

Last update:

Update count: **0**

Registration date

2017-11-11, 1396/08/20

Registrant information

Name

Farzad Aghdashi

Name of organization / entity

Shahid Beheshti University of Medical Sciences

Country

Iran (Islamic Republic of)

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Recruitment status

Recruitment complete

Funding source

Investigator

Expected recruitment start date

2017-10-12, 1396/07/20

Expected recruitment end date

2018-06-20, 1397/03/30

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison of Sling and Single interrupted suture on post-operation complications after extraction of impacted mandibular third molars

Public title

Influence of Sling suture on post-operation complications after extraction of mandibular third molars

Purpose

Treatment

Inclusion/Exclusion criteria

inclusion criteria:patients who have mandibular third molars with bilaterally identical level of impaction. age 18<<25 years; nonsmoker; no systemic diseases; no pregnancy or lactation; no medication in the last 6 months ; no inflammation, such as acute pericoronitis or periodontal disease, in the oral cavity. exclusion criteria: patients whose level of impaction & tissue coverage are not bilaterally symmetrical,age >25 years; smokers; patients with systemic disease; pregnancy or lactation period;use medication in the last 6 months;any inflammation such as acute pericoronitis and periodontal disease

Age

From **18 years** old to **25 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **36**

Randomization (investigator's opinion)

Randomized

Randomization description

Blinding (investigator's opinion)

Single blinded

Blinding description

Placebo

Not used

Assignment

Parallel

Other design features

randomization will be done by flipping a coin.

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Shahid Beheshti University of Medical Sciences

Street address

Velenjak, Daneshju Blv

City

Tehran

Postal code

Approval date

2017-10-23, 1396/08/01

Ethics committee reference number

IR.SBMU.RIDS.REC.1396.523

Health conditions studied

1

Description of health condition studied

complication of third molar surgery

ICD-10 code

T88.9

ICD-10 code description

complication of surgical and medical care, unspecified

2

Description of health condition studied

gingival recession

ICD-10 code

K06.0

ICD-10 code description

Gingival recession

(generalized)(localized)(postinfective)(post-operative)

3

Description of health condition studied

periodontal condition

ICD-10 code

K05.5

ICD-10 code description

Other periodontal diseases

4

Description of health condition studied

Dehiscence

ICD-10 code

T81.3

ICD-10 code description

Disruption of operation wound, not elsewhere classified

5

Description of health condition studied

pain

ICD-10 code

K08.8

ICD-10 code description

Other specified disorders of teeth and supporting structures

Primary outcomes

1

Description

pain

Timepoint

baseline, 2nd, 7th & 14th

Method of measurement

Visual Analogue Scale

2

Description

dehiscence

Timepoint

7th & 14 day

Method of measurement

O Michigan periodontal probe

3

Description

clinical attachment loss

Timepoint

baseline, 22nd week

Method of measurement

O Michigan periodontal probe

4

Description

probing pocket depth

Timepoint

baseline, 22nd week

Method of measurement

O Michigan periodontal probe

Secondary outcomes

1

Description

trismus

Timepoint

baseline, 2nd, 7th & 14th

Method of measurement

[(preoperative measurement - postoperative measurement) / preoperative measurement] * 100%.

2

Description

facial swelling

Timepoint

baseline, 2nd, 7th & 14th

Method of measurement

[(postoperative measurement - preoperative measurement) / preoperative measurement] * 100%.

Intervention groups

1

Description

single interrupted suture: is used to approximate the buccal and lingual flaps. The needle penetrates the outer surface of the first flap. The under surface of the opposite flap is engaged, and, the suture is brought back to the initial side, the knot is tied

Category

Treatment - Surgery

2

Description

Sling suture: The needle engages the outer surface of the flap and, encircles the tooth. The outer surface of the

same flap of the adjacent inter dental area is engaged. The suture is returned to the initial site, and the knot is tied.

Category

Treatment - Surgery

Recruitment centers

1

Recruitment center

Name of recruitment center

Dentistry Faculty of Shahid Seheshti University of Medical Science

Full name of responsible person

Dr. Seyed Farzad Aghdashi

Street address

City

Tehran

2

Recruitment center

Name of recruitment center

Ghazi Tabatabaie Clinic

Full name of responsible person

Dr. Seyed Farzad Aghdashi

Street address

City

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Investigator

Full name of responsible person

Dr. Seyed Farzad Aghdashi

Street address

Velenjak, Daneshju Blv.

City

Tehran

Grant name

-

Grant code / Reference number

-

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

Yes

Title of funding source

Investigator

Proportion provided by this source

100

Public or private sector

empty

Domestic or foreign origin

empty

Category of foreign source of funding

empty

Country of origin

Type of organization providing the funding
empty

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Sharing plan

Deidentified Individual Participant Data Set (IPD)

empty

Study Protocol

empty

Statistical Analysis Plan

empty

Informed Consent Form

empty

Clinical Study Report

empty

Analytic Code

empty

Data Dictionary

empty