

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

Comparison of standard incision and comma shaped incision for impacted mandibular third molar surgery

Protocol summary

Study aim

Aim of the study is to use comma shaped incision for impacted mandibular third molars rather than traditional ward incision because comma incision is expected to be associated with lesser incidence of postoperative pain, swelling and trismus.

Design

A concealed, randomized, blinded controlled clinical trial with a parallel group design of 100 patients, enrolled between 3rd October 2018 to 2nd April 2019 ,and followed for 6 months

Settings and conduct

Non-probability, Consecutive sampling done in dept of Oral and Maxillofacial Surgery, AFID Rawalpindi.

Participants/Inclusion and exclusion criteria

Inclusion Criteria: Patients with fully impacted lower third molars; Patients having physical status 1 according to ASA classification. Exclusion Criteria: Pregnant women, nursing mothers; Patients with non-localized odontogenic infection; Tooth associated with pathologies, Patients on radiotherapy, chemotherapy, bisphosphonates, bone diseases

Intervention groups

Intervention group 1: Surgical removal of impacted mandibular third molar using comma-shaped incision. Intervention group 2: Surgical removal of impacted mandibular third molar using traditional ward incision.

Main outcome variables

Pain; swelling; trismus.

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20230714058773N2**

Registration date: **2023-09-03, 1402/06/12**

Registration timing: **retrospective**

Last update: **2023-09-03, 1402/06/12**

Update count: **0**

Registration date

2023-09-03, 1402/06/12

Registrant information

Name

Tehmina Maryam

Name of organization / entity

Armed forces institute of dentistry, combined military hospital, Rawalpindi, Pakistan

Country

Pakistan

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+92 333 9576737

Email address

tehminamaryam@hotmail.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2018-10-03, 1397/07/11

Expected recruitment end date

2019-04-02, 1398/01/13

Actual recruitment start date

2018-10-03, 1397/07/11

Actual recruitment end date

2019-04-02, 1398/01/13

Trial completion date

2019-04-04, 1398/01/15

Scientific title

Comparison of standard incision and comma shaped incision for impacted mandibular third molar surgery

Public title

Comparison of standard incision and comma shaped incision for impacted mandibular third molar surgery

Purpose

Treatment

Inclusion/Exclusion criteria**Inclusion criteria:**

Patients with fully impacted lower third molars (more than two-thirds of the crown covered with alveolar bone evaluated on periapical radiograph or OPG) Patients having physical status 1 according to American Society of Anesthesiologists (ASA) classification.

Exclusion criteria:

Pregnant women, nursing mothers Patient with non-localized odontogenic infection Tooth associated with pathologies i.e. cysts, mandibular angle fractures, tumors Patients on radiotherapy, chemotherapy, bisphosphonates, bone diseases e.g. Paget's disease.

Age

From **18 years** old to **45 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **100**

Actual sample size reached: **100**

Randomization (investigator's opinion)

Randomized

Randomization description

Non-probability, Consecutive sampling was done in stratified randomization by allotment of random numbers. Randomization was done by giving Odd numbers to the intervention group and even numbers to the control group

Blinding (investigator's opinion)

Not blinded

Blinding description**Placebo**

Not used

Assignment

Parallel

Other design features**Secondary Ids**

empty

Ethics committees**1****Ethics committee****Name of ethics committee**

Ethics committee of armed forces institute of dentistry CMH Rawalpindi

Street address

Range road Rawalpindi

City

Rawalpindi

Postal code

46000

Approval date

2018-10-03, 1397/07/11

Ethics committee reference number**Health conditions studied****1****Description of health condition studied**

Third molar impacted and embedded teeth

ICD-10 code

K01

ICD-10 code description

Embedded and impacted teeth

2**Description of health condition studied**

Third molar embedded teeth

ICD-10 code

K01.1

ICD-10 code description

Impacted teeth

Primary outcomes**1****Description**

Pain

Timepoint

0 and 1st post operative day

Method of measurement

10 point Visual Analog Scale as None, Weak, Moderate and Severe pain . If VAS ≥ 7 then it was considered pain

2**Description**

Post Operative swelling

Timepoint

1st and 3rd post operative day

Method of measurement

Swelling assessed as distance measured between: Lateral canthus of the eye to the gonion angle; Tragus to the commissure of the mouth; Tragus to pogonion. These readings were taken pre-operatively and compared with the readings taken on 1st and 3rd day post-operatively.

3**Description**

Trismus/ mouth opening

Timepoint

0 and 1st post operative day

Method of measurement

Mouth opening measured after 24 hours of surgery as interincisal distance in millimeters and patient had trismus if interincisal mouth opening is less than or equal to 29 mm

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group: A total of 50 cases with fully impacted lower third molars of age 18-45 years and both genders were included. Pregnant women, nursing mothers, patient with non-localized odontogenic infection, tooth associated with pathologies i.e. cysts, mandibular angle fractures, tumors, patients on radiotherapy, chemotherapy, bisphosphonates, bone diseases e.g. Paget's disease were excluded. Surgical removal of impacted mandibular third molar was done under local anaesthesia using comma shaped incisions. Postoperative pain experienced by patient after third molar surgery was assessed at 24 hours after extraction on 10 point Visual Analog Scale as None, Weak, Moderate and Severe pain. If VAS \geq 7 then it was considered pain. Mouth opening was measured after 24 hours of surgery as interincisal distance in millimeters and patient had trismus if interincisal mouth opening is less than or equal to 29 mm. Swelling was assessed as distance measured between: Lateral canthus of the eye to the gonion angle; Tragus to the commissure of the mouth; Tragus to pogonion.

Category

Treatment - Surgery

2

Description

Control group: 50 cases with fully impacted lower third molars of age 18-45 years and both genders were included. Pregnant women, nursing mothers, patient with non-localized odontogenic infection, tooth associated with pathologies i.e. cysts, mandibular angle fractures, tumors, patients on radiotherapy, chemotherapy, bisphosphonates, bone diseases e.g. Paget's disease were excluded. Surgical removal of impacted mandibular third molar was done under local anaesthesia using standard ward flap incision Postoperative pain experienced by patient after third molar surgery was assessed at 24 hours after extraction on 10 point Visual Analog Scale as None, Weak, Moderate and Severe pain. If VAS \geq 7 then it was considered pain. Mouth opening was measured after 24 hours of surgery as interincisal distance in millimeters and patient had trismus if interincisal mouth opening is less than or equal to 29 mm. Swelling was assessed as distance measured between: Lateral canthus of the eye to the gonion angle; Tragus to the commissure of the mouth; Tragus to pogonion.

Category

Treatment - Surgery

Recruitment centers

1

Recruitment center

Name of recruitment center

Armed forces institute of dentistry CMH ,Rawalpindi ,Pakistan

Full name of responsible person

Tehmina Maryam

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Armed forces institute of dentistry CMH Rawalpindi

Full name of responsible person

Nazir Khan

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nazeerkhan996@gmail.com

Grant name

Grant code / Reference number

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

Yes

Title of funding source

Armed forces institute of dentistry CMH Rawalpindi

Proportion provided by this source

50

Public or private sector

Private

Domestic or foreign origin

Domestic

Category of foreign source of funding

empty

Country of origin

Type of organization providing the funding

Academic

2

Sponsor

Name of organization / entity

Armed forces institute of dentistry CMH Rawalpindi

Full name of responsible person

Noman Tahir

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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

Armed forces institute of dentistry CMH Rawalpindi

Proportion provided by this source

50

Public or private sector

Private

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**

Armed forces institute of dentistry CMH Rawalpindi

Full name of responsible person

Tehmina Maryam

Position

Registrar

Latest degree

Bachelor

Other areas of specialty/work

Oral and maxillofacial surgery

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Person responsible for scientific inquiries**Contact****Name of organization / entity**

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Full name of responsible person

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Position

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Latest degree

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

Armed forces institute of dentistry CMH Rawalpindi

Full name of responsible person

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Position

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Latest degree

Bachelor

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

No - There is not a plan to make this available

Justification/reason for indecision/not sharing IPD

There is no further information

Study Protocol

No - There is not a plan to make this available

Statistical Analysis Plan

No - There is not a plan to make this available

Informed Consent Form

No - There is not a plan to make this available

Clinical Study Report

No - There is not a plan to make this available

Analytic Code

Not applicable

Data Dictionary

No - There is not a plan to make this available