

Clinical Trial Protocol

Iranian Registry of Clinical Trials

11 Sep 2026

Comparison of chlorhexidine gel , hydrogen peroxide gel and povidone iodine gel effects on the symptoms of dental socket (pain and swelling) following the wisdom mandibular teeth surgery.

Protocol summary

Study aim

Comparison of the effect of chlorhexidine gel, hydrogen peroxide gel and povidone iodine gel on pain and swelling after mandibular wisdom tooth surgery

Design

112 people with wisdom teeth will be selected for clinical trials with the Inclusion criteria that require dental extraction surgery. All patients are asked to read and sign the Consent. Patients will be randomly divided to four groups with 28 members. Control patients (normal saline user), chlorine hexidine gel consumer group, povidone iodine gel consumer group, and hydrogen peroxide gel consumer group. The main anesthesia technique used will be the alveolar inferior nerve block and the long buccal nerve block, which will also use the infiltration anesthesia method to complete the anesthesia of the target area. After extracting the wisdom tooth and rinsing with 40 ml of sterile serum, three groups of 28 people were filled with the desired gels and then the desired site was sutured with the help of chromic gut thread. The patient's pain swelling will be measured twice a day immediately before surgery and the day of first third Seventh and fifteenth after taking the gel,.

Settings and conduct

112 patients who have the approval of the diagnosis department and have referred to Zahedan School of Dentistry, Department of Surgery.

Participants/Inclusion and exclusion criteria

Inclusion criteria : 1. Has a wisdom tooth in the lower jaw with the degree of Secrecy level A and B and class I and II (based on Pell & Gregory classification) 2. Age between 18 and 50 years Output Criteria: 1. Any systemic disease 2. Patients whom surgery has been performed traumatized.

Intervention groups

1. Control group (normal saline) 2. Chlorhexidine gel

group 3. Hydrogen peroxide gel group 4. povidone iodine gel group

Main outcome variables

Examination of pain and swelling in the surgical area after the intervention

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20200411047022N1**

Registration date: **2020-04-15, 1399/01/27**

Registration timing: **prospective**

Last update: **2020-04-15, 1399/01/27**

Update count: **0**

Registration date

2020-04-15, 1399/01/27

Registrant information

Name

Sina Hakimi

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 54 3344 1814

Email address

sinahakimi@zaums.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2020-04-20, 1399/02/01

Expected recruitment end date

2020-07-22, 1399/05/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison of chlorhexidine gel , hydrogen peroxide gel and povidone iodine gel effects on the symptoms of dental socket (pain and swelling) following the wisdom mandibular teeth surgery.

Public title

Comparison of chlorhexidine gel , hydrogen peroxide gel and povidone iodine gel effects on the symptoms of dental socket (pain and swelling) following the wisdom mandibular teeth surgery

Purpose

Treatment

Inclusion/Exclusion criteria**Inclusion criteria:**

It has a wisdom tooth in the mandible with a degree of secrecy of levels A and B and classes I and II (based on the Pell & Gregory classification). Age between 18 and 50 years Conscious consent to participate in the study It has commuting and follow-up facilities after intervention

Exclusion criteria:

Any systemic disease Patients who experience severe pain or abscesses after surgery and are unable to attend the follow-up session. Patients whom surgery has been performed traumatized

Age

From **18 years** old to **50 years** old

Gender

Both

Phase

3

Groups that have been masked

- Participant

Sample size

Target sample size: **112**

Randomization (investigator's opinion)

Randomized

Randomization description

Patients will be randomly divided to four groups with 28 member. control group (normal saline user), chlorine hexidine gel consumer group, povidone iodine gel consumer group, and hydrogen peroxide gel consumer group.

Blinding (investigator's opinion)

Single blinded

Blinding description

The participant will not be informed of the type of substance used after wisdom tooth surgery

Placebo

Used

Assignment

Parallel

Other design features**Secondary Ids**

empty

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

Ethics Committee of Zahedan University of Medical Sciences

Street address

Dr Hesabi Sq

City

Zahedan

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Sistan-va-Balouchestan

Postal code

9816743463

Approval date

2020-02-02, 1398/11/13

Ethics committee reference number

IR.ZAUMS.REC.1398.444

Health conditions studied**1****Description of health condition studied**

pain

ICD-10 code

G50.1

ICD-10 code description

Atypical facial pain

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

The amount of pain

Timepoint

Right before surgery, One day, three days, seven days, fifteen days after taking the gel will be done twice a day.

Method of measurement

The patient's pain measurement will be on Visual analog scale (VAS)

2**Description**

Amount of swelling

Timepoint

Right before surgery, One day, three days, seven days, fifteen days after taking the gel will be done twice a day.

Method of measurement

The linear distance between the lingual surface of the first molar mandibular and the tangent to the skin of the cheek is measured using a caliper.

Secondary outcomes

empty

Intervention groups

1

Description

Control group: It is Normal saline and patients in the control group are asked to rinse their mouth twice a day for 15 days after surgery with the normal saline.

Category

Treatment - Drugs

2

Description

First intervention group: The chlorhexidine gel is from the Morvabon brand, which is applied to the area after surgery.

Category

Treatment - Drugs

3

Description

Second intervention group: The Povidone iodine gel is from the Behvazan brand, which is applied to the area after surgery.

Category

Treatment - Drugs

4

Description

Third intervention group: The Hydrogen peroxide gel is from the Mehradco brand, which is applied to the area after surgery.

Category

Treatment - Drugs

Recruitment centers

1

Recruitment center

Name of recruitment center

Zahedan Dentistry School

Full name of responsible person

Dr Sina Hakimi

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Azadegan East Street

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Zahedan University of Medical Sciences

Full name of responsible person

Noor Mohammad Bakhshani

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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

Zahedan University of Medical Sciences

Proportion provided by this source

40

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

Zahedan University of Medical Sciences

Full name of responsible person

Sina Hakimi

Position

Assistant Professor

Latest degree

Specialist

Other areas of specialty/work

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Latest degree

Specialist

Other areas of specialty/work

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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

No need

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

No - There is not a plan to make this available

Data Dictionary

No - There is not a plan to make this available