

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 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

**Province**

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

##### Street address

Azadegan East Street

##### City

Zahedan

##### Province

Sistan-va-Balouchestan

##### Postal code

9817699693

##### Phone

+98 54 3344 1824

##### Email

sinahakimi@yahoo.com

## Sponsors / Funding sources

### 1

#### Sponsor

##### Name of organization / entity

Zahedan University of Medical Sciences

##### Full name of responsible person

Noor Mohammad Bakhshani

##### Street address

Dr.Hesabi Sq

##### City

Zahedan

##### Province

Sistan-va-Balouchestan

##### Postal code

9816743463

##### Phone

+98 54 3329 5796

##### Email

zaums.research@gmail.com

#### 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

Dentistry

##### Street address

East Azadegan Street

##### City

Zahedan

##### Province

Sistan-va-Balouchestan

##### Postal code

9817699693

##### Phone

+98 54 3344 1824

**Email**

sinahakimi@yahoo.com

**Person responsible for scientific 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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**Contact**

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**Position**

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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