Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 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.from All patients are asked to read and sign the Consent 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 longe 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 chromatic gut thread.The patient's pain swelling will be measured twice a day immediately before surgery and the day of first thired 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 merber.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 iodon gel is from the Behvazan brand, which is applied to the area after surgery.
Category
Treatment - Drugs

4

Description
Third intervention group:The Hydrogen proxide 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

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 updating data

Contact

Name of organization / entity

Zahedan University of Medical Sciences

Full name of responsible person

Sina Hakimi

Position

Assistant Professor

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Dentistry

Street address

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9817699693

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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