Clinical Trial Protocol
Iranian Registry of Clinical Trials

09 Nov 2026

Comparison of efficacy of hydrogen peroxide mouthwash with chlorhexidine on healing and pain after surgical removal of impacted mandibular third molars

Protocol summary

Study aim

Comparison of the effect of hydrogen peroxide mouthwash with chlorhexidine on the healing and pain after surgery of the mandibular third molars of patients referred to the surgical department of the School of Dentistry of Islamic Azad University of Tehran in 1400.

Design

Clinical trial with control group, with parallel groups, double-blind, non randomized, phase 3 on 62 patients.Patients who visit on even days of the week receive the first intervention and patients who visit on odd days receive the second intervention.

Settings and conduct

The patients will be divided into two groups of 31, case and control, by non randomized double blinding method. Before start the operation, 15 cc from one of the Nanosil® and chlorhexidine 0.2% Najho 250 mL would be for 1min to wash their mouths with it. The evaluation of the pain level with the help of VAS and the measurement of the recovery rate (healing)is carried out by the "wound's healing process" scale.

Participants/Inclusion and exclusion criteria

Having a mandibular third molars with a surgery difficulty (A,B) (Pell and Gregory), having an age between 18-50 years, non smoker

Intervention groups

The patients were divided into two groups : 31case and 31control groups. In case and control groups , before the onset of surgery , 15 cc of one of the patients with hydrogen peroxide Nanosil® and chlorhexidine Najho® 0.2% 250ml will be allocated to wash their mouth for one minute. The patients will be told to wash their mouth twice a day for a week after surgery with one of the hydrogen peroxide and chlorhexidine solutions for 30 seconds.Patients' pain is assessed before the first postoperative analgesic with the VAS scale.The rate of healing and swelling is assessed at one, three and seven days after surgery.Dry socket and infection are recorded within a week if present.

Main outcome variables

Pain rate; healing rate

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20171216037893N6**
Registration date: **2021-12-16, 1400/09/25**
Registration timing: **registered_while_recruiting**

Last update: **2021-12-16, 1400/09/25**
Update count: **0**

Registration date

2021-12-16, 1400/09/25

Registrant information

Name

Hamidreza Mahaseni aghdam

Name of organization / entity

Country

Iran (Islamic Republic of)

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+98 21 2240 6440

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2021-12-11, 1400/09/20

Expected recruitment end date

2022-05-11, 1401/02/21

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison of efficacy of hydrogen peroxide mouthwash with chlorhexidine on healing and pain after surgical removal of impacted mandibular third molars

Public title

Comparison of the effect of hydrogen peroxide mouthwash with chlorhexidine on healing and pain after mandibular impact wisdom tooth surgery

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Having a mandibular third molar degree of surgery difficulty (A,B) (Pell and Gregory) Being between 18-50 years old Non smoker

Exclusion criteria:

Having systemic diseases Medication (antipsychotic, anticoagulants, antibiotics and analgesics) Need for antibiotic prophylaxis (such as immunosuppressed patients) Having an infection Any type of bone pathology History of radiotherapy Having painful conditions (having teeth with indication for root canal treatment) Prohibition of surgery for any reason Pregnancy or breastfeeding Allergy to lidocaine or mouthwashes Alcohol and opioid addiction

Age

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

Gender

Both

Phase

3

Groups that have been masked

- Participant
- Care provider
- Investigator
- Outcome assessor

Sample size

Target sample size: **62**

Randomization (investigator's opinion)

Not randomized

Randomization description

Blinding (investigator's opinion)

Double blinded

Blinding description

The patients will be divided into two groups of 31, case and control, by non randomized double blinding method. Patients who visit on even days of the week receive the first intervention and patients who visit on odd days receive the second intervention. Thus, a third party who does not participate in the study will buy mouthwashes and transfer them to the same shaped bottles with two different lid colors. , Which color is related to which type of mouthwash is announced by the same third party, after reviewing the results.

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Research Ethics Committees of Islamic Azad University Dental Branch Tehran - Iran

Street address

No. 9, 9th Neyestan St., Pasdaran Ave., Tehran

City

Tehran

Province

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Postal code

1946853314

Approval date

2021-11-29, 1400/09/08

Ethics committee reference number

IR.IAU.DENTAL.REC.1400.134

Health conditions studied

1

Description of health condition studied

healing and pain after surgical removal of impacted mandibular third molars

ICD-10 code

Z48.814

ICD-10 code description

Encounter for surgical aftercare following surgery on the teeth or oral cavity

Primary outcomes

1

Description

Intensity of pain

Timepoint

Before taking the first analgesic after surgery

Method of measurement

Visual Analogue Scale (VAS)

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group: Before start the operation, 15 cc of Nanosil® mouthwash will be administered to wash their mouths with it for 1 minute. Patients must wash their mouths two times a day with 15 cc from hydrogen peroxide mouthwash for 30 seconds a week after the surgery.

Category
Treatment - Drugs

2

Description
Control group: Before start the operation, 15 cc of chlorhexidine Najho® 0.2% 250mlmouthwash will be administered to wash their mouths with it for 1 minute. Patients must wash their mouths two times a day with 15 cc from chlorhexidine Najho® 0.2% 250ml mouthwash for 30 seconds a week after the surgery.

Category
Treatment - Drugs

Recruitment centers

1

Recruitment center

Name of recruitment center
Faculty of Dentistry, Azad University of Medical Sciences, Tehran, Iran

Full name of responsible person
Dr Hamid Reza Mahaseni Aghdam

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Islamic Azad University

Full name of responsible person
Dr. Arash Azizi

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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
Islamic Azad University

Proportion provided by this source
100

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
Islamic Azad University

Full name of responsible person
Hamidreza Mahaseni aghdam

Position
Assistant professor

Latest degree
Specialist

Other areas of specialty/work
Dentistry

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Sharing plan

Deidentified Individual Participant Data Set (IPD)

Undecided - It is not yet known if there will be a plan to make this available

Study Protocol

Undecided - It is not yet known if there will be a plan to make this available

Statistical Analysis Plan

Undecided - It is not yet known if there will be a plan to make this available

Informed Consent Form

Undecided - It is not yet known if there will be a plan to make this available

Clinical Study Report

Undecided - It is not yet known if there will be a plan to make this available

Analytic Code

Undecided - It is not yet known if there will be a plan to make this available

Data Dictionary

Undecided - It is not yet known if there will be a plan to make this available