

Clinical Trial Protocol

Iranian Registry of Clinical Trials

22 Jul 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)

Phone

+98 21 2240 6440

Email address

h_mahaseni@dentaliau.ac.ir

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

Tehran

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% 250ml 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 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

Street address

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

City

Tehran

Province

Tehran

Postal code

1946853314

Phone

+98 21 2564 5703

Fax

Email

h_mahaseni@dentaliau.ac.ir

Web page address

<http://www.dentaliau.ac.ir/>

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Islamic Azad University

Full name of responsible person

Dr. Arash Azizi

Street address

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

City

Tehran

Province

Tehran

Postal code

1946853314

Phone

+98 21 2256 4571

Email

hamidmahaseni@gmail.com

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

Street address

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

City

Tehran

Province

Tehran

Postal code

1946853314

Phone

+98 21 2256 4571

Fax

Email

h_mahaseni@dentaliau.ac.ir

Person responsible for scientific 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

Street address

Dental faculty, 9th neyestan street, pasdaran street

City

Tehran

Province

Tehran

Postal code

1946853314

Phone

+98 21 2240 6440

Fax

Email

h_mahaseni@dentaliau.ac.ir

Person responsible for updating data

Contact

Name of organization / entity

Islamic Azad University

Full name of responsible person

Hamidreza Mahaseni aghdam

Position

Assistant professor

Latest degree

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Dentistry

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Dental faculty, 9th neyestan street, pasdaran street

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Province

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Postal code

1946853314

Phone

+98 21 2240 6440

Fax

Email

h_mahaseni@dentaliau.ac.ir

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