

Clinical Trial Protocol

Iranian Registry of Clinical Trials

14 Jun 2026

The effect of glycyrrhiza glabra, salvia officinalis and zinc extract mouth wash on oral health of dental students: Clinical trial study

Protocol summary

Study aim

In according to previous studies herbal mouth washes had obvious beneficial effects on dental caries and gingival health. In according to harmful effect of chemical mouth washes, herbal mouth washes production with minimal side effects and affordable for all of society population is very important. The aim of this study is evaluation of glycyrrhiza glabra, salvia officinalis and zinc extract mouth washes individually and in combination on streptococcus mutans growth, carious bacteria reduction and gingival health.

Design

Dental students voluntary participated to study are divided into five equal groups. By selecting the mouthwash blindly, they entered the mouthwashes and control group (water). The researcher is also unaware of the type of mouthwash and prescribes it as a code.

Settings and conduct

The study will be conducted in the dental faculty of Hamadan Dental Students on a three-blinded basis.

Participants/Inclusion and exclusion criteria

Healthy dental students with informed consent without systemic disease, drug use, periodontal disease and pregnancy

Intervention groups

Mouth wash containing of glycyrrhiza glabra, salvia officinalis and zinc extract

Main outcome variables

Reduction of carious bacteria growth, gingival inflammation, plaque index and bleeding on probing.

General information

Reason for update

In according to other references study duration reduced from 30 day to 15 day 2 times a day.

Acronym

IRCT registration information

IRCT registration number: **IRCT20191225045891N1**

Registration date: **2020-01-31, 1398/11/11**

Registration timing: **prospective**

Last update: **2020-07-11, 1399/04/21**

Update count: **2**

Registration date

2020-01-31, 1398/11/11

Registrant information

Name

Fatemeh Ahmadi-Motamayel

Name of organization / entity

Country

Iran (Islamic Republic of)

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+98 81 3838 1059

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2020-04-20, 1399/02/01

Expected recruitment end date

2022-04-21, 1401/02/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of glycyrrhiza glabra, salvia officinalis and zinc extract mouth wash on oral health of dental students: Clinical trial study

Public title

Glycyrrhiza glabra, salvia officinalis and zinc extract

mouth wash on oral health

Purpose

Prevention

Inclusion/Exclusion criteria

Inclusion criteria:

Healthy dental students Students with informed consent

Exclusion criteria:

Systemic disease Drug taking Gingival and periodontal disease Pregnancy

Age

From **20 years** old to **30 years** old

Gender

Both

Phase

N/A

Groups that have been masked

- Participant
- Care provider
- Investigator
- Data analyser

Sample size

Target sample size: **200**

Randomization (investigator's opinion)

Not randomized

Randomization description

Blinding (investigator's opinion)

Triple blinded

Blinding description

participants, principle investigator, healthcare providers and data analyses are blinded

Placebo

Used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Hamadan University of Medical Sciences

Street address

Shahid Fahmideh

City

Hamadan

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Hamadan

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6517838677

Approval date

2019-12-21, 1398/09/30

Ethics committee reference number

IR.UMSHA.REC.1398.786

Health conditions studied

1

Description of health condition studied

Gingival health

ICD-10 code

K02

ICD-10 code description

Dental caries

Primary outcomes

1

Description

Gingival health

Timepoint

Before intervention and 1 month after mouth wash using

Method of measurement

Observational

Secondary outcomes

1

Description

Plaque accumulation

Timepoint

Before and 1 month after intervention

Method of measurement

Oral disclosing tablets

Intervention groups

1

Description

Intervention group: 200 dental student voluntarily selected and divided randomly to five group each group consisting 40 student. 1. control group receive water 2. This group receive combination of glycyrrhiza glabra, Salvia officinalis and zinc mouth washes, 3. this group receive glycyrrhiza glabra, mouth washes 4. this group receive Salvia officinalis mouth washes, 5. this group receive zinc mouth washes, Two file filled for all students. one before and one 15 day after intervention. each persons used mouth washes 2 times a day for 1 minutes. Files consist: biographic data, bleeding on probing, gingival index and plaque accumulation

Category

Prevention

2

Description

Control group: Only receive water.

Category

Lifestyle

Recruitment centers

1

Recruitment center

Name of recruitment center
Hamadan Dental School
Full name of responsible person
Fateme Ahmadi-Motamayel
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Sponsors / Funding sources

1

Sponsor

Name of organization / entity
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Full name of responsible person
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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
Hamedan University of Medical Sciences
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
Hamedan University of Medical Sciences
Full name of responsible person
Fateme Ahmadi-Motamayel
Position
Professor
Latest degree
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Other areas of specialty/work
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Person responsible for updating data

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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

There is no further information

Study Protocol

Yes - There is a plan to make this available

Statistical Analysis Plan

Yes - There is 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

Not applicable

Data Dictionary

Not applicable

Title and more details about the data/document

IPD collected for the primary outcome measure only

When the data will become available and for how long

starting 6 months after publication

To whom data/document is available

people working in academic institutions

Under which criteria data/document could be used

Only for information about results

From where data/document is obtainable

fatahmadim@yahoo.com

What processes are involved for a request to access data/document

6 month after article publication and 1 month after request

Comments