

Clinical Trial Protocol

Iranian Registry of Clinical Trials

07 Jul 2026

Evaluating the Effect of Chlorhexidine on Decreasing Contamination of Toothbrush with Streptococcus Mutans.

Protocol summary

Summary

Background and Objectives: The aim of this study is to evaluate the best method using of chlorhexidine mouthwash in removing Streptococcus Mutans containing dental plaques through the evaluation of pathogens on person's toothbrush. Inclusion criteria is no dental caries and exclusion criteria is disconspire with volunteer In this study, 84 dental students is randomly divided into 4 groups: 1-dipping continuously toothbrush in chlorhexidine, 2-simple washing with chlorhexidine after brushing. 3-dipping toothbrush in mouthwash for 10 minutes. 4-simple washing with water. Colony Forming Unit (CFU) of Streptococcus mutans on toothbrush is a primary outcome measure and Colony Forming Unit (CFU) of Streptococcus mutans in saliva is a Secondary outcome measure.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2016091529133N3**

Registration date: **2016-11-06, 1395/08/16**

Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2016-11-06, 1395/08/16

Registrant information

Name

Neda Gholami

Name of organization / entity

Zanjan University of Medical Sciences

Country

Iran (Islamic Republic of)

Phone

+98 21 7770 1401

Email address

dr.gholami.n@zums.ac.ir

Recruitment status

Recruitment complete

Funding source

Vice chancellor for research, Zanjan University of Medical Sciences

Expected recruitment start date

2016-05-09, 1395/02/20

Expected recruitment end date

2016-05-30, 1395/03/10

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Evaluating the Effect of Chlorhexidine on Decreasing Contamination of Toothbrush with Streptococcus Mutans.

Public title

Evaluating the Effect of Chlorhexidine on Decreasing Contamination of Toothbrush with Streptococcus Mutans.

Purpose

Prevention

Inclusion/Exclusion criteria

inclusion criteria: a good oral hygiene, no dental caries or periodontal disease, no mouth breathing, cleft palate, disuse mouth wash chlorhexidine in last 3 weeks, ability to brushing teeth exclusion criteria: oral caries, disconspire with volunteer

Age

From **18 years** old to **32 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: 84

Randomization (investigator's opinion)

Randomized

Randomization description

Blinding (investigator's opinion)

Not blinded

Blinding description

Placebo

Used

Assignment

Parallel

Other design features

Block Randomization

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics committee of Zanjan University of Medical Sciences

Street address

Azadi Square, Zanjan, Zanjan University of Medical Sciences

City

zanjan

Postal code

Approval date

2016-02-18, 1394/11/29

Ethics committee reference number

zums.rec.1394.3

Health conditions studied

1

Description of health condition studied

dental caries

ICD-10 code

k02

ICD-10 code description

K02.9

Primary outcomes

1

Description

Colony Forming Unit (CFU) of Streptococcus mutans on toothbrush

Timepoint

3 weeks after intervention

Method of measurement

Toothbrush sample collection for culture

Secondary outcomes

1

Description

Colony Forming Unit (CFU) of Streptococcus mutans in saliva

Timepoint

3 weeks after the study

Method of measurement

sampling of saliva and culture in the laboratory

Intervention groups

1

Description

Intervention Group 1: Patients kept toothbrush for 24 hours in Chlorhexidine

Category

Prevention

2

Description

Intervention Group 2: Patients kept toothbrush for 10 minutes in Chlorhexidine

Category

Prevention

3

Description

Control Group : Did not use mouthwash and just used water

Category

Placebo

4

Description

Intervention Group 3: Patients just washed the toothbrush with Chlorhexidine

Category

Prevention

Recruitment centers

1

Recruitment center

Name of recruitment center

Faculty of dentistry, Zanjan University of Medical Sciences

Full name of responsible person

dr neda gholami

Street address

Azadi Square, Zanjan, Zanjan University of Medical Sciences

City

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Vice Chancellor for research of Zanjan University of Medical Sciences

Full name of responsible person

dr Masud Vakili

Street address

Azadi Square, Zanjan, Zanjan University of Medical Sciences

City

zanjan

Grant name

Grant code / Reference number

Is the source of funding the same sponsor organization/entity?

Yes

Title of funding source

Vice Chancellor for research of Zanjan University of Medical Sciences

Proportion provided by this source

100

Public or private sector

empty

Domestic or foreign origin

empty

Category of foreign source of funding

empty

Country of origin

Type of organization providing the funding

empty

Person responsible for general inquiries

Contact

Name of organization / entity

دانشگاه علوم پزشکی زنجان

Full name of responsible person

dr neda gholami

Position

Assistant Professor of Oral Medicine

Other areas of specialty/work

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Person responsible for scientific

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Contact

Name of organization / entity

Zanjan University of Medical Sciences

Full name of responsible person

dr neda gholami

Position

Assistant Professor of Oral Medicine

Other areas of specialty/work

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Contact

Name of organization / entity

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Full name of responsible person

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Position

Assistant Professor of Oral Medicine

Other areas of specialty/work

Street address

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Fax

Email

Web page address

Sharing plan

Deidentified Individual Participant Data Set (IPD)

empty

Study Protocol

empty

Statistical Analysis Plan

empty

Informed Consent Form

empty

Clinical Study Report

empty

Analytic Code

empty

Data Dictionary

empty