

Clinical Trial Protocol

Iranian Registry of Clinical Trials

13 Jun 2026

Comparison of Plaque Control Efficacy Of Chewing Gum Containing Ethylenediaminetetraaceticacid(EDTA),methylsulfonylmethane(MSM) and Xylitol with Chlorehexidine Mouthrinse

Protocol summary

Summary

This study will be done with purpose of comparison of plaque control efficacy of chewing gum containing ethylenediaminetetraaceticacid, methyl sulfonyl methane and xylitol with chlorehexidine mouthrinse. For this purpose we choose 24 patients who referred to periodontics clinic of dental college of Hamedan University of Medical Sciences. These patients must have over 40% of O'leary plaque index and have no systemic diseases. This study is an interventional and cross-over designed. For each patient a SRP will be done and O'leary plaque index, gingival index and sulcus bleeding index will be recorded. Patients will be divided into two groups randomly. one group will receive EDTA/MSM/Xylitol chewing gum and another group will receive chlorehexidine mouthrinse. After 14 days all 3 Indexes will be recorded again and a tooth polishing will be done for each patient. Groups' intervention will be changed and after another 14 days and all 3 Indexes will be recorded again and a tooth polishing will be done for each patient.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2017070234849N1**

Registration date: **2017-08-28, 1396/06/06**

Registration timing: **prospective**

Last update:

Update count: **0**

Registration date

2017-08-28, 1396/06/06

Registrant information

Name

Morteza Shakhs Niaee

Name of organization / entity

Hamedan University of Medical Sciences

Country

Iran (Islamic Republic of)

Phone

+98 81 3252 6200

Email address

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Recruitment status

Recruitment complete

Funding source

Vice Chancellor for research and innovation of Hamedan University of Medical Sciences

Expected recruitment start date

2017-09-23, 1396/07/01

Expected recruitment end date

2017-11-22, 1396/09/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison of Plaque Control Efficacy Of Chewing Gum Containing Ethylenediaminetetraaceticacid(EDTA),methylsulfonylmethane(MSM) and Xylitol with Chlorehexidine Mouthrinse

Public title

Considering the effect of a new chewing gum in preventing dental plaque formation

Purpose

Prevention

Inclusion/Exclusion criteria

patients must have over 40% of o'leary plaque index.

patients must have no systemic disease.

Age

No age limit

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: 24

Randomization (investigator's opinion)

Randomized

Randomization description**Blinding (investigator's opinion)**

Not blinded

Blinding description**Placebo**

Not used

Assignment

Crossover

Other design features**Secondary Ids**

empty

Ethics committees**1****Ethics committee****Name of ethics committee**

Ethics Committee of Hamedan University of Medical Sciences

Street address

Hamedan University of Medical Sciences, Ayatollah kashani boulevard, khaje rashid cross

City

Hamedan

Postal code**Approval date**

2017-07-08, 1396/04/17

Ethics committee reference number

IR.UMSHA.REC.1396.306

Health conditions studied**1****Description of health condition studied**

gingivitis and periodontitis

ICD-10 code

k05

ICD-10 code description

gingivitis and periodontal diseases

Primary outcomes**1****Description**

O'leary plaque index

Timepoint

14 days

Method of measurement

Visionary scale using disclosing agents

2**Description**

Gingival index

Timepoint

14 days

Method of measurement

Visionary scale of gingival inflammation

3**Description**

sulcus bleeding index

Timepoint

14 days

Method of measurement

Visionary scale of sulcus bleeding

Secondary outcomes

empty

Intervention groups**1****Description**

Intervention group: using EDTA/MSM/Xylitol chewing gum,twice a day,each time one piece of 2.7 gram gum, chewing for 10 minutes

Category

Prevention

2**Description**

Control Group: using 0.12% chlorehexidine mouthrinse, twice a day,each time 10 ml,rinsing for 30 seconds

Category

Prevention

Recruitment centers**1****Recruitment center****Name of recruitment center**

Dentistry College of Hamedan University of Medical Sciences

Full name of responsible person

morteza shakhs niaee

Street address

Hamedan University of Medical Sciences, Ayatollah Kashani boulevard, Khaje Rashid cross

City
Hamedan

Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Vice Chancellor for research and innovation of
Hamedan University of Medical Sciences

Full name of responsible person
dr morad hedayati panah

Street address
Hamedan University of Medical Sciences, Ayatollah
Kashani boulevard, Khaje Rashid cross

City
Hamedan

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 and innovation of Hamedan
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
Hamedan University of Medical Sciences

Full name of responsible person
Morteza Shakhs Niaee

Position
Dentistry student

Other areas of specialty/work

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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