

Clinical Trial Protocol

Iranian Registry of Clinical Trials

17 Sep 2026

Evaluation of zinc acetate Efficacy in chlorhexidin toothpaste as an adjunct on dental stain, gingival and plaque index

Protocol summary

Summary

Introduction: Bacterial plaque is the most important factor in periodontal diseases. However due to the limitation of mechanical plaque control methods, chemical materials are used as Supplements. Chlorhexidine (CHX) is one of the most effective materials in chemical plaque control, but because of cationic effect of CHX and interaction with anionic materials of toothpastes, its effectiveness is reduced. Therefore, in the present study, we compared Crest ANTI-Cavity toothpaste with KIN gingival and ORTHOKIN toothpastes that contained CHX. Methods: This clinical trial study carried out on 30 patients who had gingivitis. The patients were classified in 3 groups (each 10). Scaling and Root Planning (SRP) was performed on patients and plaque index and Bleeding index were recorded on the same session. After 14 days, the patients examined again and the aforementioned toothpastes were used twice daily. After 14 day, the patients were examined for the third time and BOP and plaque index were recorded. Results: According to the examinations, the average BOP in the 3rd meeting for the, ORTHOKIN, Crest ANTI_CAVITY and KIN gingival was %10.54, %12.15 and %10.6 respectively, also the plaque index in the 3rd meeting was %32.22, %50.35 and %27.8. In these 3 groups, BOP didn't have a reduction while the plaque index significantly differed between ORTHOKIN and KIN gingival compared to Crest ANTI_Cavity ($P < 0.05$).

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2016101330289N1**

Registration date: **2017-01-09, 1395/10/20**

Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2017-01-09, 1395/10/20

Registrant information

Name

Mohadeseh Arabsolghar

Name of organization / entity

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Recruitment status

Recruitment complete

Funding source

besat reserach center

Expected recruitment start date

2011-12-31, 1390/10/10

Expected recruitment end date

2013-12-31, 1392/10/10

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Evaluation of zinc acetate Efficacy in chlorhexidin toothpaste as an adjunct on dental stain, gingival and plaque index

Public title

effect of zinc on treatment of gingivitis

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: the patients with gingivitis that have a minimum of 24 natural permanent teeth; gingival index II which is defined as moderate inflammation; redness, edema and glazing; bleeding on probing. exclusion criteria: smoking; dental prosthesis; orthodontic devices; administration of antibiotics; anti-inflammatory drugs; the presence of any systemic disease; less than 24 permanent teeth

Age

No age limit

Gender

Both

Phase

3

Groups that have been masked

No information

Sample size

Target sample size: 45

Randomization (investigator's opinion)

Randomized

Randomization description

Blinding (investigator's opinion)

Double blinded

Blinding description

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

, Kerman Oral and Dental Diseases Research Center
AND Kerman Social Determinants on Oral Health Rese

Street address

, Kerman Oral and Dental Diseases Research Center
AND Kerman Social Determinants on Oral Health
Research Center AND Department of Periodontics,
School of Dentistry, Kerman University of Medical
Sciences, Kerman, Iran

City

kerman

Postal code

Approval date

2012-07-05, 1391/04/15

Ethics committee reference number

k/91/378

2

Ethics committee

Name of ethics committee

Besat research center

Street address

kerman

City

kerman

Postal code

Approval date

2012-09-22, 1391/07/01

Ethics committee reference number

k/91/378

Health conditions studied

1

Description of health condition studied

gingivitis

ICD-10 code

B99

ICD-10 code description

Other and unspecified infectious diseases

Primary outcomes

1

Description

plaque index, , gingival index

Timepoint

14 days

Method of measurement

disclosing agent, probing

Secondary outcomes

1

Description

stain index

Timepoint

dayes 14

Method of measurement

disclosingg agent

Intervention groups

1

Description

second group: in second group (10 patients) use
Orthokin toothpaste (containing CHX and Zinc) for 2
weeks.

Category

Treatment - Drugs

2

Description

third group:10 patients use Kin-gingival toothpaste
(containing CHX) for 2 weeks.

Category

Treatment - Drugs

3

Description

first group: 10 patients use anticavity Crest toothpaste for 14 days as control group

Category

Treatment - Drugs

Recruitment centers

1

Recruitment center

Name of recruitment center

Kerman Social Determinants on Oral Health Research Center AND Department of Periodontics, School of

Full name of responsible person

Street address

City

kerman

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

besat research center, Kerman university of medical sciences

Full name of responsible person

mohadeseh arabsolghar

Street address

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City

kerman

Grant name

Grant code / Reference number

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

Yes

Title of funding source

besat research center, Kerman 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

Department of Periodontology, School of Dentistry, Kerman University of Medical Sciences. Kerman, Ir

Full name of responsible person

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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