Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Comparative evaluation of anesthetic efficacy of 1.8 and 3.6 milliliter buccal infiltrations, and buccal plus palatal infiltrations with articaine in maxillary first molars with irreversible pulpitis

Protocol summary

Summary

Goal : To choose the best anesthetic administration technique for first maxillary molar diagnosed with irreversible pulpitis Study design : Randomized , single blind clinical trial Inclusion Criteria :Patients with first maxillary molar diagnosed with Symptomatic Irreversible Pulpitis Exclusion Criteria : patients that have used sedatives in the last 12 hours,pregnancy,allergies sample size :45 study intervention : Group 1:1.8 milliliters buccal infiltration Group 2 : 3.6 milliliters buccal infiltration , Group 3 : 1.8 milliliters buccal infiltration plus 0.5 milliliters palatal infiltration Intervention time : before access cavity preparation Outcomes Studied : level of pain on a visual analogue scale

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2015011020238N2**
Registration date: **2015-03-04, 1393/12/13**
Registration timing: **registered_while_recruiting**

Last update:
Update count: **0**

Registration date

2015-03-04, 1393/12/13

Registrant information

Name

Farzaneh Afkhami Jeddi

Name of organization / entity

Tehran University of Medical Sciences International Campus

Country

Iran (Islamic Republic of)

Phone

+98 21 5585 1131

Email address

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Recruitment status

Recruitment complete

Funding source

Tehran University of Medical Sciences International Campus Dental School

Expected recruitment start date

2014-01-15, 1392/10/25

Expected recruitment end date

2015-03-15, 1393/12/24

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparative evaluation of anesthetic efficacy of 1.8 and 3.6 milliliter buccal infiltrations, and buccal plus palatal infiltrations with articaine in maxillary first molars with irreversible pulpitis

Public title

Comparison of anesthetic efficacy of articaine in different anesthetic administration methods and volumes in maxillary first molars

Purpose

Treatment

Inclusion/Exclusion criteria

Exclusion criteria: Patients with systemic diseases , Patients that have used any form of sedatives in the past 12 hours , Patients that have allergies to anesthetics or sulfites, pregnancy , Patients that are unable give informed consent , Patients with periapical lesions. Inclusion criteria :Patients between the ages of 18 to 60 ,

Patients with first maxillary molars diagnosed with Symptomatic Irreversible Pulpitis

Age
From **18 years** old to **60 years** old

Gender
Both

Phase
N/A

Groups that have been masked
No information

Sample size
Target sample size: **45**

Randomization (investigator's opinion)
Randomized

Randomization description

Blinding (investigator's opinion)
Single blinded

Blinding description

Placebo
Not used

Assignment
Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
Tehran University of Medical Sciences International Campus Dental School

Street address
Zolfi St. - Khani Abad no

City
Tehran

Postal code

Approval date
2013-07-14, 1392/04/23

Ethics committee reference number
21092

Health conditions studied

1

Description of health condition studied
Irreversible Pulpitis

ICD-10 code
k04.0

ICD-10 code description
Pulpitis

Primary outcomes

1

Description
Pain

Timepoint
after 20 minutes

Method of measurement
Visual Analogue Scale

Secondary outcomes

empty

Intervention groups

1

Description
group 1: Maxillary first molar buccal infiltration with 4% Articaine with 1:100000 Epinephrine 1.8 ml

Category
Treatment - Other

2

Description
group 2 :Maxillary first molar buccal infiltration with 4% Articane with 1:100000 Epinephrine 3.6 ml

Category
Treatment - Other

3

Description
group 3:Maxillary first molar buccal infiltration with 4% Articaine with 1:100000 Epinephrine 1.8 ml plus palatal infiltration with 4% Articaine with 1:100000 Epinephrine 0.5 ml

Category
Treatment - Other

Recruitment centers

1

Recruitment center

Name of recruitment center
Tehran University of Medical Sciences International Campus Dental School

Full name of responsible person
Reza Yazdani

Street address
Zolfi St. -Khani Abad no - Tehran

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Tehran University of Medical Sciences International Campus Dentistry School

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
Tehran University of Medical Sciences International Campus Dentistry School

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
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Professional Doctorate 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