

Clinical Trial Protocol

Iranian Registry of Clinical Trials

23 Jul 2026

Comparison the effect of lidocaine inferior alveolar nerve block versus articaine buccal and lingual infiltration as primary injection on onset and duration of pulpal anesthesia in mandibular second molar with healthy pulp

Protocol summary

Summary

The aim of the present study is to compare the effect of lidocaine blocks versus articaine buccal and lingual infiltration as first injection on onset and duration of anesthesia of visitors of endo, department during 2016-2017. The distinct objectives of present study are: determining qualified patients and assigning them to control and test groups, determining time of start and duration of anesthesia for these two groups. All patients with anesthetic indication in mandibular second molar with healthy pulp and two indicative quadrants were studied. Their quadrants were randomly categorized into two groups of test (articaine infiltration) and control (lidocaine blocks). The injector (syringe) had identical needle tip. The test group had articaine infiltration made in Citodent (amount: 1 carpool) and control group will be regarded as next quadrant on which the same person is administered with same syringe and lidocaine block instruments (made by Daro-Pakhsh company). For both groups, after administration start of anesthesia is recorded every minutes through electric pulp tester and it is recorded in information form no.2. In addition, duration of anesthesia, time of anesthesia (recorded every minute) is recorded in information form no.2 in the same method until anesthesia is over. Qualified individuals without systemic and neurologic diseases and sensitivity to anesthetic drugs, smoking and alcohol and drug addiction second mandibular teeth with healthy pulp and free from infection and swelling on both sides. in the present study, 30 individuals offering 60 samples were analyzed.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2017021523620N7**

Registration date: **2017-05-10, 1396/02/20**

Registration timing: **registered_while_recruiting**

Last update:

Update count: **0**

Registration date

2017-05-10, 1396/02/20

Registrant information

Name

Mohammadreza Moshari

Name of organization / entity

Shahid Beheshti University of Medical Sciences

Country

Iran (Islamic Republic of)

Phone

+98 21 2243 2595

Email address

rmoshari@sbmu.ac.ir

Recruitment status

Recruitment complete

Funding source

Investigator

Expected recruitment start date

2017-03-10, 1395/12/20

Expected recruitment end date

2018-03-11, 1396/12/20

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison the effect of lidocaine inferior alveolar nerve block versus articaine buccal and lingual infiltration as primary injection on onset and duration of pulpal anesthesia in mandibular second molar with healthy pulp

Public title

Efficacy of articaine buccal and lingual infiltration on pulp anesthesia

Purpose

Health service research

Inclusion/Exclusion criteria

Inclusion criteria: second mandibular molar teeth with healthy pulp. Exclusion criteria: systemic disease; sensitivity to anesthetic drugs; smoking and alcohol and drug addiction; acute infection and swelling

Age

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

Gender

Both

Phase

3

Groups that have been masked

No information

Sample size

Target sample size: **60**

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

Islamic azad university,dental branch

Street address

No 4, 10th Neyestan, Pasdaran avenue, Tehran, Iran

City

Tehran

Postal code

1946853314

Approval date

2016-12-20, 1395/09/30

Ethics committee reference number

IR.IAU.DENTAL.REC.1395,19

Health conditions studied

1

Description of health condition studied

Pulp

ICD-10 code

k04

ICD-10 code description

Deseases of pulp and periapical tissues

Primary outcomes

1

Description

Onset pulp anesthesia

Timepoint

5 minutes after injection, 8 minutes after injection, 11 minutes after injection, 15 minutes after injection, 20 minutes after injection, 25 minutes after injection, 30 minutes after injection, 45 minutes after injection, 60 minutes after injection, 75 minutes after injection, 90 minutes after injection

Method of measurement

In minutes

2

Description

Duration of pulpal anesthesia

Timepoint

5 minutes after injection, 8 minutes after injection, 11 minutes after injection, 15 minutes after injection, 20 minutes after injection, 25 minutes after injection, 30 minutes after injection, 45 minutes after injection, 60 minutes after injection, 75 minutes after injection, 90 minutes after injection

Method of measurement

In minutes

Secondary outcomes

1

Description

Duration of anesthesia

Timepoint

5 minutes after injection, 8 minutes after injection, 11 minutes after injection, 15 minutes after injection, 20 minutes after injection, 25 minutes after injection, 30 minutes after injection, 45 minutes after injection, 60 minutes after injection, 75 minutes after injection, 90 minutes after injection

Method of measurement

In minutes

Intervention groups

1

Description

1.8 mg articaine buccal and lingual infiltration on mandibular second molar in the intervention group

Category

N/A

2**Description**

1.8 mg lidocaine inferior alveolar nerve block in the control group

Category

Treatment - Drugs

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

Islamic azad university, dental branch

Full name of responsible person

Dr Ehsan Esnaashari

Street address

No 4, 10th Neyestan, Pasdaran avenue, Tehran, Iran

City

Tehran

Sponsors / Funding sources**1****Sponsor****Name of organization / entity**

Islamic Azad University, Dental Branch

Full name of responsible person

Dr Arash Azizi

Street address

No 4, 10th Neyestan, Pasdaran avenue, Tehran, Iran

City

Tehran

Grant name**Grant code / Reference number****Is the source of funding the same sponsor organization/entity?**

Yes

Title of funding source

Islamic Azad University, Dental Branch

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**

Islamic Azad University, Dental Branch

Full name of responsible person

Dr Ehsan Esnaashari

Position

PHD

Other areas of specialty/work**Street address**

No 133, 9th Boostan, Pasdaran avenue, Tehran, Iran

City

Tehran

Postal code

1941733113

Phone

+98 21 2279 3163

Fax**Email**

ehsan_dmd@yahoo.com

Web page address

Drehsanesnaashari.ir

Person responsible for scientific inquiries**Contact****Name of organization / entity**

Islamic Azad University, Dental Branch

Full name of responsible person

Dr Hengameh Bakhtiar

Position

PhD

Other areas of specialty/work**Street address**

No 4, 10th Neyestan, Pasdaran avenue, Tehran, Iran

City

Tehran

Postal code

1946853314

Phone

+98 21 2256 4571

Fax**Email**

ehsan_dmd@yahoo.com

Web page address

Drehsanesnaashari.ir

Person responsible for updating data**Contact****Name of organization / entity**

Islamic Azad University, Dental Branch

Full name of responsible person

Bahare Nazari

Position

Student

Other areas of specialty/work**Street address**

No 9, 3rd street, Ayatollah Kashani, Tehran, Iran

City

Tehran

Postal code

1946853314

Phone

+98 21 4417 0076

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