Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Anesthetic Efficacy of Gow-Gates Nerve Block, Inferior Alveolar Nerve Block, and Their Combination in Mandibular Molars in Patient with Symptomatic Irreversible Pulpitis

Protocol summary

Summary

The aim of this phase 3 prospective randomized clinical trial, was to evaluate the anesthetic efficacy of Gow-Gates nerve block (GGNB), inferior alveolar nerve block (IANB), and their combination for mandibular molars in patients with symptomatic irreversible pulpitis . One hundred fifty healthy patients over 18 years old that do not take any medication within 24 hours before the treatment with diagnosis of symptomatic irreversible pulpitis in mandibular molar tooth by use of cold test were selected.The patients randomly received two cartridge of 1.8 mL 2% lidocaine with 1:80,000 epinephrine by two GGNB injections or two IANB injections or one GGNB injection plus one IANB injection. Access cavity preparation was initiated 15 minutes after injections. Lip numbness was a requisite for all the patients. Success was specified as no or mild pain on the basis of Heft-Parker visual analog scale recordings during access cavity preparation or initial instrumentation.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201705092541N5**
Registration date: **2017-07-10, 1396/04/19**
Registration timing: **registered_while_recruiting**

Last update:
Update count: **0**

Registration date

2017-07-10, 1396/04/19

Registrant information

Name

Masoud Saatchi

Name of organization / entity

School of Dentistry, Isfahan University of Medical Sciences

Country

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Recruitment status

Recruitment complete

Funding source

Vice chancellor for research, Isfahan University of Medical Sciences

Expected recruitment start date

2017-02-19, 1395/12/01

Expected recruitment end date

2017-08-23, 1396/06/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Anesthetic Efficacy of Gow-Gates Nerve Block, Inferior Alveolar Nerve Block, and Their Combination in Mandibular Molars in Patient with Symptomatic Irreversible Pulpitis

Public title

Anesthetic Efficacy of Gow-Gates Nerve Block, Inferior Alveolar Nerve Block, and Their Combination in Mandibular Molars in Patient with Symptomatic Irreversible Pulpitis

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: Eighteen years of age and over; being in good health condition; having a mandibular first molar tooth with symptomatic irreversible pulpitis; not having severe periodontal problem; normal periapical radiographic appearance (other than a widened periodontal ligament); no history of allergy to local anesthesia or sulfite Exclusion criteria: pregnancy; lactation; taking any medications that might influence anesthetic assessment; swelling or having fistula near target tooth; active sites of pathosis in area of injection; any problem that patient could not give informed consent; lack of lip numbness within 15 minutes after injection

Age
From **18 years** old to **65 years** old

Gender
Both

Phase
3

Groups that have been masked
No information

Sample size
Target sample size: **150**

Randomization (investigator's opinion)
Randomized

Randomization description

Blinding (investigator's opinion)
Not blinded

Blinding description

Placebo
Not used

Assignment
Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
Ethics committee of Isfahan University of Medical Sciences

Street address
Isfahan University of Medical Sciences, Hezar Jarib Street, Isfahan, Iran. P.O.Box: 81744-176.

City
Isfahan

Postal code
8174673461

Approval date
2017-02-03, 1395/11/15

Ethics committee reference number
IR.MUI.REC.1395.3043

Health conditions studied

1

Description of health condition studied
irriversible pulpitis

ICD-10 code
K04.0

ICD-10 code description
Pulpitis: NOS acute chronic (hyperplastic)(ulcerative) irreversible reversible

Primary outcomes

1

Description
Initial pain

Timepoint
Before treatment

Method of measurement
Heft-Parker Visual Analog Scale (VAS)

Secondary outcomes

1

Description
Post pain

Timepoint
During procedure

Method of measurement
Heft-Parker Visual Analog Scale

Intervention groups

1

Description
The patients received two GGNB injections of 1.8 mL 2% lidocaine with 1:180,000 epinephrine

Category
Treatment - Other

2

Description
The patients received two IANB injections of 1.8 mL 2% lidocaine with 1:80,000 epinephrine

Category
Treatment - Other

3

Description
The patients received one GGNB injection plus one IANB injection of 1.8 mL 2% lidocaine with 1:80,000 epinephrine

Category
Treatment - Other

Recruitment centers

1

Recruitment center

Name of recruitment center
Department of Endodontics, Dental School, Isfahan

Full name of responsible person
Masoud Saatchi

Street address
Isfahan University of Medical Sciences, Hezar Jarib Street, Isfahan, Iran. P.O.Box: 81744-176

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Isfahan

Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Vice chancellor for research, Isfahan University of Medical Sciences

Full name of responsible person
Masoud Saatchi

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Vice chancellor for research, Isfahan University of Medical Sciences, Hezar Jarib Street, Isfahan, Iran. P.O.Box: 81744-176

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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
Vice chancellor for research, Isfahan 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
Isfahan University of Medical Sciences

Full name of responsible person
Masoud Saatchi

Position
professor

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