

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 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

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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**

irreversible 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

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

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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

City

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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

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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