

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 2026

### Comparison of success of inferior alveolar nerve block with and without digital panoramic radiography

#### Protocol summary

##### Study aim

En Comparison of success of inferior alveolar nerve block with and without digital panoramic radiography

##### Design

One-blind, stratified random clinical trial based on jaw side on 53 patients by split mouth

##### Settings and conduct

53 patients with inclusion and exclusion criteria enter the study among the patients referred to the surgery department of Dental Branch of Islamic Azad University of Tehran. Using the table of random numbers, the side of the jaw to be injected is determined and the injection is done without radiography. next step, the injection of the opposite side is performed using radiography and determine the position of the mandibular foramen related to the occlusal plan. Patients are blinded to injection on each side and finally the results of the two methods are compared

##### Participants/Inclusion and exclusion criteria

Patients over 18 years, indication of bilateral mandibular block, the power to understand and express the sense, to have digital panoramic radiography, presence of at least two posterior teeth on each side of mandible, non contraindication to the use of routine carpol containing epinephrine, not use other anesthesia methods along with the mandibular block, not restriction of mouth opening and trismus, not having an infection at the injection site

##### Intervention groups

Case Group: Injection of inferior alveolar nerve block using radiography Control group: Injection of inferior alveolar nerve block without radiography on the opposite side

##### Main outcome variables

Tingling of lower lip and chin, onset time of anesthesia

#### General information

##### Reason for update

##### Acronym

IANB

##### IRCT registration information

IRCT registration number: **IRCT20210119050080N2**

Registration date: **2021-02-11, 1399/11/23**

Registration timing: **prospective**

Last update: **2021-02-11, 1399/11/23**

Update count: **0**

##### Registration date

2021-02-11, 1399/11/23

##### Registrant information

###### Name

Eshagh Lasemi

###### Name of organization / entity

###### Country

Iran (Islamic Republic of)

###### Phone

+98 21 2256 4571

###### Email address

elasemi@gmail.com

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2021-02-19, 1399/12/01

##### Expected recruitment end date

2021-06-05, 1400/03/15

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

##### Scientific title

Comparison of success of inferior alveolar nerve block with and without digital panoramic radiography

## Public title

Comparison of success of inferior alveolar nerve block with and without digital panoramic radiography

## Purpose

Treatment

## Inclusion/Exclusion criteria

### Inclusion criteria:

Patients over 18 years Indication of bilateral mandibular block The power to understand and express the sense To have digital panoramic radiography Presence of at least two posterior teeth on each side of mandible

### Exclusion criteria:

Contraindications to the use of routine carpol containing epinephrine Use other anesthesia methods along with the mandibular block Restriction of mouth opening and trismus To have not digital panoramic radiography Having an infection at the injection site Patient's dissatisfaction to enter the study

## Age

From **18 years** old

## Gender

Both

## Phase

3

## Groups that have been masked

- Participant

## Sample size

Target sample size: **53**

More than 1 sample in each individual

Number of samples in each individual: **2**

One side of the patient's mandible as the control group and the opposite side as the case group receives the intervention test.

## Randomization (investigator's opinion)

Randomized

## Randomization description

The method of randomization is stratified based on jaw side. Using random numbers table, it is determined which side of each patient's jaw (right or left) to inject first. Then, in order to prevent bias, injection is performed without using the digital panoramic radiography guide on the side specified by random numbers table. And on the opposite side, injection is performed using a digital panoramic radiography guide.

## Blinding (investigator's opinion)

Single blinded

## Blinding description

Participants in this study will be blinded to which side of the jaw receives the intervention.

## Placebo

Not used

## Assignment

Parallel

## Other design features

## Secondary Ids

empty

## Ethics committees

### 1

#### Ethics committee

##### Name of ethics committee

Ethics Committee of Dental School, Islamic Azad University of medical science of Tehran

##### Street address

No.9, Neiestan9 Ave, Pasdaran Ave

##### City

Tehran

##### Province

Tehran

##### Postal code

1946853314

#### Approval date

2020-12-14, 1399/09/24

#### Ethics committee reference number

IR.IAU.DENTAL.REC.1399.236

## Health conditions studied

### 1

#### Description of health condition studied

Success of inferior alveolar nerve block

#### ICD-10 code

#### ICD-10 code description

## Primary outcomes

### 1

#### Description

Tingling of lower lip and chin

#### Timepoint

Immediately after injection

#### Method of measurement

Ask the patient

## Secondary outcomes

### 1

#### Description

Onset of anesthesia

#### Timepoint

Immediately after injection

#### Method of measurement

chornometer

## Intervention groups

### 1

#### Description

Intervention group: Determination of upper anterior position of mandibular foramen on digital panoramic radiography And calculate the distance to the occlusal plan using a caliper. specify the same distance inside the

patient's mouth and perform the injection

**Category**

Treatment - Other

**2****Description**

Control group: Confluence Location of horizontal line passes from deepest point of pterygomandibular raphe to vertical line passes from tree quarters of anterior of ramus Determines where the needle enters the inner surface of Ramus. Slowly insert the needle into the tissue to reach the bone stop. The average depth of needle entry is 20 to 25 millimeter .After dealing with the bone, pull out the needle by 1 millimeter and After aspiration, inject 1.5 milliliter of anesthetic solution in 60 seconds.

**Category**

Treatment - Other

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

Department of Surgery, Faculty of Dentistry, Islamic Azad University of Tehran

**Full name of responsible person**

Dr Eshagh Lasemi

**Street address**

No.9, Neiestan9 Ave, Pasdaran Ave

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**Province**

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**Postal code**

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**Email**

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

Islamic Azad University

**Full name of responsible person**

Dr Arash Azizi

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**Email**

elasemi@yahoo.com

**Web page address**

http://dental.iautmu.ac.ir/fa

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

Yes

**Title of funding source**

Islamic Azad University

**Proportion provided by this source**

100

**Public or private sector**

Private

**Domestic or foreign origin**

Domestic

**Category of foreign source of funding**

*empty*

**Country of origin****Type of organization providing the funding**

Academic

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

Islamic Azad University

**Full name of responsible person**

Dr Eshagh Lasemi

**Position**

Associate professor

**Latest degree**

Specialist

**Other areas of specialty/work**

Dentistry

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

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**Sharing plan****Deidentified Individual Participant Data Set (IPD)**

Yes - There is a plan to make this available

**Study Protocol**

Undecided - It is not yet known if there will be a plan to make this available

**Statistical Analysis Plan**

Undecided - It is not yet known if there will be a plan to make this available

**Informed Consent Form**

Undecided - It is not yet known if there will be a plan to make this available

**Clinical Study Report**

Undecided - It is not yet known if there will be a plan to make this available

**Analytic Code**

Undecided - It is not yet known if there will be a plan to make this available

**Data Dictionary**

Undecided - It is not yet known if there will be a plan to make this available

**Title and more details about the data/document**

A part of the information, such as information on the main outcome, can be shared.

**When the data will become available and for how long**

The start of the access period will be 6 to 12 months after the results are released

**To whom data/document is available**

Data will only be available to researchers working in academic institutions.

**Under which criteria data/document could be used**

Data will be available for dental research centers, universities and public private health centers. All clinicians using inferior alveolar nerve block in order to dental procedure are allowed to use the documentation.

**From where data/document is obtainable**

Applicants can contact the person responsible for the article to receive the information. Dr Eshagh Lasemi, elasemi@yahoo.com 00989123871430 No9, Neistan9 Ave, Pasdaran Ave, Tehran

**What processes are involved for a request to access data/document**

Demand by email to the person responsible for the article elasemi@yahoo.com

**Comments**