Clinical Trial Protocol
Iranian Registry of Clinical Trials

16 Sep 2026

Comparison of inferior alveolar nerve block (IANB) success rate in injection of two persocaine (lidocaine2%, epinephrine1/80000) cartridges with one cartridge for lower molars extraction

Protocol summary

Summary

Inferior alveolar nerve block (IANB) anesthesia is a challenging technique that its primary reason is blind nature of this technique. One way for higher success rate is increasing anesthesia volume with use more number cartridge. In this study, 100 patients are randomly divided in two 50 numbers patients groups (group 1 involves patients with 2 carteridge injection and group 2 involves patients with one cateridge injection). In group 1, second injection will be done immediately after first injection. 0.2 ml of cartridge will be used for long buccal anesthesia in both groups. After 5 minutes, for anesthesia efficacy evaluation, we will use pin prick test with a probe on soft tissue of corner of inferior lip, mandibular body, anterior two third of lingual and floor of mouth mucosa. In the positive response to test, patient is named Failed case. In negative response, extraction will be done. As an alternative test, on the base of patient idea, painfulness or painlessness extraction will be considered as failure or success result.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2013022612610N1**
Registration date: **2013-04-11, 1392/01/22**
Registration timing: **registered_while_recruiting**

Last update:
Update count: **0**

Registration date

2013-04-11, 1392/01/22

Registrant information

Name

Seyed Hamed Jalalian Hashemy

Name of organization / entity

Zahedan University of Medical Sciences

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Recruitment status

Recruitment complete

Funding source

Vice chancellor for Research and Technology of Zahedan University of Medical Sciences

Expected recruitment start date

2013-04-04, 1392/01/15

Expected recruitment end date

2013-06-05, 1392/03/15

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison of inferior alveolar nerve block (IANB) success rate in injection of two persocaine (lidocaine2%, epinephrine1/80000) cartridges with one cartridge for lower molars extraction

Public title

The success rate of inferior alveolar nerve block in injection of two persocaine cartridges compared with one cartridge in mandibular molars extraction

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: patient with mandibular molar teeth

that can be remove with routine method; teeth without fascial space infection; patient with reliable psychology and patient with 18 to 60 years age. Exclusion criteria: patients with systemic complications in ASA III Grouping and higher; patients who addicted to drug and alcohol and patients with systemic problems that have contraindication to epinephrine administration.

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: **100**

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
Vice chancellor for Research and Technology, Zahedan University of Medical Sciences

Street address
University of Medical Sciense, Dr Hesabi square

City
Zahedan

Postal code

Approval date
2013-03-12, 1391/12/22

Ethics committee reference number
91_2085

Health conditions studied

1

Description of health condition studied
Extraction of posterior teeth

ICD-10 code
K08.1

ICD-10 code description
Loss of teeth due to accident, extraction or local periodontal disease

Primary outcomes

1

Description
Inferior Alveolar Nerve Block

Timepoint
5 minutes after injection

Method of measurement
Using a probe and Pin Prick test

Secondary outcomes

1

Description
Pain

Timepoint
during extraction

Method of measurement
patient idea

Intervention groups

1

Description
The use of two anesthetic cartridges

Category
Treatment - Drugs

2

Description
The use of one anesthetic cartridge

Category
Treatment - Drugs

Recruitment centers

1

Recruitment center

Name of recruitment center
Zahedan Dental College

Full name of responsible person
Doctor Hamed Jalalian

Street address
Dental College, Tirandazi alley

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Vice chancellor for Research and Technology,

Zahedan University of Medical Sciences
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Dr. Hamid Reza Mahmood Zade Sagheb
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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 and Technology, Zahedan 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

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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