

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

Efficacy of Preoperative Ibuprofen and Meloxicam on the Success rate of Inferior Alveolar Nerve Block for Teeth with Irreversible Pulpitis

Protocol summary

Summary

The objective of this research was to compare the efficacy of premedication with Ibuprofen and Meloxicam on the depth of anesthesia in lower molar teeth with irreversible pulpitis. This double-blind, randomized controlled clinical trial was carried out on 92 patients referred to endodontic department of Shahid Beheshti Dental School. All the patients presented symptoms of irreversible pulpitis in first mandibular tooth and required Root Canal Therapy. Patients were randomly divided into 4 groups of 23 patients. The first group received no premedication, second group received 7.5 mg meloxicam, third group received 600 mg ibuprofen and the fourth group received placebo one hour before administration of inferior alveolar nerve block (IANB) with 2% lidocaine containing 1:80000 epinephrine. Before taking the medication, electrical pulp testing (EPT) and the Heft-Parker visual analog scale (VAS) were used to evaluate the sensitivity and pain at the baseline. After 15 minutes lower lip and tongue tip numbness was assessed, and then EPT was used again to evaluate the tooth sensitivity. The pain during access preparation was also recorded using the Heft-parker VAS.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2015071423207N1**

Registration date: **2015-10-22, 1394/07/30**

Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2015-10-22, 1394/07/30

Registrant information

Name

Amir Movahhedian

Name of organization / entity

Shahid Beheshti Dental School

Country

Iran (Islamic Republic of)

Phone

+98 21 2217 5351

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amirmovahedian@sbmu.ac.ir

Recruitment status

Recruitment complete

Funding source

Research deputy, Dental School, Shahid Beheshti University of Medical Sciences

Expected recruitment start date

2011-03-21, 1390/01/01

Expected recruitment end date

2012-03-20, 1391/01/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Efficacy of Preoperative Ibuprofen and Meloxicam on the Success rate of Inferior Alveolar Nerve Block for Teeth with Irreversible Pulpitis

Public title

efficacy of premedication on success rate of anesthesia in lower jaw

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: patients with the signs and symptoms of irreversible pulpitis in mandibular first molar tooth.

Exclusion criteria: presence of any systemic diseases;

pregnancy or breast-feeding; taking any kind of medications within a period of 8 h prior to the treatment that could interfere with the medications used in this study; teeth with extensive coronal restorations; casting restorations; previous root canal therapies; severe periodontal diseases and peri apical radiolucencies; and contraindications to the drugs used in this study

Age

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

Gender

Both

Phase

2

Groups that have been masked

No information

Sample size

Target sample size: **92**

Randomization (investigator's opinion)

Randomized

Randomization description

Blinding (investigator's opinion)

Double blinded

Blinding description

Placebo

Used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics Committee of Shahid Beheshti University of Medical Sciences

Street address

Chamran highway Evin Daneshjoo Blvd

City

Tehran

Postal code

Approval date

2010-09-23, 1389/07/01

Ethics committee reference number

357

Health conditions studied

1

Description of health condition studied

Irrversible pulpitis

ICD-10 code

K04.0

ICD-10 code description

Irrversible pulpitis

Primary outcomes

1

Description

tooth sensitivity

Timepoint

before intervention and one hour after intervention

Method of measurement

using EPT device

2

Description

pain level

Timepoint

before intervention and one hour after intervention

Method of measurement

using Heft Parker visual analog scale

Secondary outcomes

empty

Intervention groups

1

Description

600 mg ibuprofen one hour before anesthesia

Category

Treatment - Drugs

2

Description

7.5 mg meloxicam one hour before anesthesia

Category

Treatment - Drugs

3

Description

placebo filled with starch powder

Category

Treatment - Drugs

Recruitment centers

1

Recruitment center

Name of recruitment center

Shahid Beheshti Dental School

Full name of responsible person

Dr Omid Dianat

Street address

Daneshjoo Blvd, Chamran Highway

City

Tehran

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Research deputy, Dentsal School, Shahid Beheshti University of Medical Sciences

Full name of responsible person

Dr arash Khojaste

Street address

Daneshjoo Blvd, Evin, Chamran Highway, Tehran

City

Tehran

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

Yes

Title of funding source

Research deputy, Dentsal School, Shahid Beheshti 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**

Shahid Beheshti Dental School

Full name of responsible person

Dr Omid Dianat

Position

Associate professor of Shahid Beheshti University of Medical Sciences

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omididianat@gmail.com

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