Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 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 o 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

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Name of organization / entity
Shahid Beheshti Dental School
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Recruitment status

Recruitment complete

Funding source
Research deputy, Dentsal 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
Irriversible pulpitis

ICD-10 code
K04.0

ICD-10 code description
Irriversible 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 Schiences
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 Schiences
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