

# Effectiveness of anesthesia in dental patients undergoing root canal treatment

<b>Submission date</b> 02/02/2021	<b>Recruitment status</b> No longer recruiting	<input type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
<b>Registration date</b> 23/02/2021	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan <input type="checkbox"/> Results
<b>Last Edited</b> 23/02/2021	<b>Condition category</b> Oral Health	<input type="checkbox"/> Individual participant data <input type="checkbox"/> Record updated in last year

## Plain English summary of protocol

### Background and study aims

In mandibular back teeth when tissues are damaged it may result in a severely painful condition which is characterized by the presence of inflammation. Root canal treatment is a standard required procedure that is performed to eliminate the diseased condition in such teeth.

Effective anesthesia is required to perform this procedure.

The aim of the study is to compare the effectiveness of two types of anesthesia to make the lower inflamed back teeth numb properly to complete the root canal treatment without pain.

### Who can participate?

Adult patients presenting with pain because of irreversibly damaged pulpal tissues in their mandibular back teeth will participate in this study.

### What does the study involve?

The study involves the injection of two types of anesthesia to compare their effectiveness.

### What are the possible benefits and risks of participating?

None

### Where is the study run from?

Qassim University (Saudi Arabia)

### When is the study starting and how long is it expected to run for?

December 2019 to February 2023

### Who is funding the study?

Investigator initiated and funded

### Who is the main contact?

1. Thonayan Abdullah Alodhaib, 361108742@qudent.org
2. Dr. Atif Agwan, m.abdulsaleem@qu.edu.sa
3. Dr. Muhammad Zubair Ahmad, m.muhammad@qu.edu.sa

# Contact information

## Type(s)

Public

## Contact name

Mr Thonayan Alodhaib

## ORCID ID

<https://orcid.org/0000-0003-3018-7032>

## Contact details

Arras

Arras

Saudi Arabia

52719

+966 0559785542

361108742@qudent.org

# Additional identifiers

## Clinical Trials Information System (CTIS)

Nil known

## ClinicalTrials.gov (NCT)

Nil known

## Protocol serial number

Nil known

# Study information

## Scientific Title

Efficacy of 4% articaine versus 2% lidocaine as supplemental infiltration for mandibular molars with irreversible pulpitis

## Study objectives

There is a difference between the efficacy of 4% articaine and 2% lidocaine for supplemental buccal infiltration in mandibular molars with Irreversible pulpitis after a failed inferior alveolar nerve block.

## Ethics approval required

Old ethics approval format

## Ethics approval(s)

Approved 10/12/2019, Dental Ethics Committee of Alrass Dental College of Qassim University of Saudi Arabia (Alrass Dental College, 11 King Abdulaziz Street, Al Rass, Saudi Arabia; +966 163800050 Ext. 10685; rass.ethical@qudent.org), ref: DRC/13M/4-20

**Study design**

Interventional randomized controlled trial

**Primary study design**

Interventional

**Study type(s)**

Treatment

**Health condition(s) or problem(s) studied**

Control of pain in symptomatic patients undergoing root canal treatment for mandibular molars with irreversible pulpitis

**Interventions**

We shall divide the patients into two groups after a standard inferior alveolar nerve block (IANB) anesthesia fails, one group will receive 2% Lidocaine buccal infiltration and the other group will receive 4% Articaine by a blinded operator.

Masking will be done by covering the anesthesia cartridges using aluminium foils. The assignment will be done using computer generated numbers. At none of these levels, the principal investigator will be involved. This will eliminate operator related bias.

**Intervention Type**

Drug

**Phase**

Not Applicable

**Drug/device/biological/vaccine name(s)**

4% articaine, 2% lidocaine with 1:100000 epinephrine

**Primary outcome(s)**

Pain measured using a visual analogue scale (VAS) after 5 minutes of anesthesia

**Key secondary outcome(s)**

There are no secondary outcome measures

**Completion date**

01/02/2023

**Eligibility****Key inclusion criteria**

Symptomatic adult patients having mandibular first and/ or second molar tooth diagnosed with acute irreversible pulpitis.

**Participant type(s)**

Patient

**Healthy volunteers allowed**

No

**Age group**

Adult

**Sex**

All

**Key exclusion criteria**

1. Patients taking antibiotic
2. Medically compromised
3. Effective inferior alveolar nerve block
4. Patients with immature root apex
5. Non-restorable teeth
6. Patient refused to sign the inform consent
7. Pregnant patient
8. Patient with history of allergy from any of the contents of anesthesia

**Date of first enrolment**

17/01/2021

**Date of final enrolment**

01/02/2023

**Locations****Countries of recruitment**

Saudi Arabia

**Study participating centre**

**Qassim University**

College of dentistry

Al Rass

Saudi Arabia

52719

**Sponsor information****Organisation**

Qassim University

**ROR**

<https://ror.org/01wsfe280>

## **Funder(s)**

### **Funder type**

Other

### **Funder Name**

investigator initiated and funded

## **Results and Publications**

### **Individual participant data (IPD) sharing plan**

All data generated or analysed during this study will be included in the subsequent results publication

### **IPD sharing plan summary**

Other