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# Effectiveness of anesthesia in dental patients undergoing root canal treatment

**Submission date**
02/02/2021

**Recruitment status**
No longer recruiting

**Registration date**
23/02/2021

**Overall study status**
Completed

**Last Edited**
23/02/2021

**Condition category**
Oral Health

[ ] Prospectively registered
[ ] Protocol
[ ] Statistical analysis plan
[ ] Results
[ ] Individual participant data
[ ] 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

# 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

### Primary study design
Interventional

### Study design
Interventional randomized controlled trial

### 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