

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

13 Jun 2026

### comparison the effect of 980-810 nm Diode Low Level Laser Therapy(LLLT) and contol group on post operative pain of patients who need crown lengthening surgery.

#### Protocol summary

##### Study aim

Evaluating the effect of 980-810 nano meter low level diode laser on post-operative pain of crown lengthening surgery.

##### Design

The clinical trial has a control group with parallel groups, one side blind and randomized based on the dice roll. For this study, 26 patients are selected. Phase one clinical trial

##### Settings and conduct

The surgical procedure in the peridontics ward of Ahwaz Dental School will perform blindly. At the end of crown crown lengthening surgery, in the test group low-level laser therapy will performed for 100 seconds on buccal and palatal flap surfaces from a distance of 3 mm Is used. Finally, flap edges are sutured. In the control group, the laser is used in off mode. The amount of pain is measured by two methods: the number of capsules that the patient consumes and the visual analogue scale (100 mm horizontal line that shows painless on the left and unbearable pain on the right, and the patient marks the amount of pain on it. And its amount is measured by a ruler) A form is given to the patients and in that form, after registering the surgical area, the patients record the intensity of pain and the number of analgesic capsules from the day of surgery for 7 days.

##### Participants/Inclusion and exclusion criteria

Inclusion criteria: Patients require bilateral maxillary premolars crown lengthening surgery. Patients with no previous medical or surgical history and a report of systemic disease. Exclusion criteria: smokers, patients with a history of long-term use of antibiotics and corticosteroids, pregnant women.

##### Intervention groups

Test group: The group treated with low level laser after crown lengthening surgery. control group: The group treated with turned off low level laser after crown

lengthening surgery .

##### Main outcome variables

Visual analog scale, number of analgesics used, treatment group

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20201102049237N1**

Registration date: **2020-12-01, 1399/09/11**

Registration timing: **registered\_while\_recruiting**

Last update: **2020-12-01, 1399/09/11**

Update count: **0**

##### Registration date

2020-12-01, 1399/09/11

##### Registrant information

##### Name

Ali Yazdanpanah

##### Name of organization / entity

##### Country

Iran (Islamic Republic of)

##### Phone

+98 61 3336 8059

##### Email address

aliyz.00071@gmail.com

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2020-11-21, 1399/09/01

##### Expected recruitment end date

2021-02-19, 1399/12/01

##### Actual recruitment start date

empty

**Actual recruitment end date**  
empty

**Trial completion date**  
empty

**Scientific title**  
comparison the effect of 980-810 nm Diode Low Level Laser Therapy(LLLT) and contol group on post operative pain of patients who need crown lengthening surgery.

**Public title**  
Evaluating the effect of 980-810 nm Diode Low Level Laser Therapy(LLLT) on post operative pain of crown lengthening surgery.

**Purpose**  
Treatment

**Inclusion/Exclusion criteria**  
**Inclusion criteria:**  
systematically healthy patients and without any medical history bilateral teeth need crown lengthening surgery  
**Exclusion criteria:**  
smoking patients patients who use antibiotics and cortico steroids for the long time peregrnancy

**Age**  
From **18 years** old

**Gender**  
Both

**Phase**  
N/A

**Groups that have been masked**

- Participant

**Sample size**  
Target sample size: **46**  
More than 1 sample in each individual  
Number of samples in each individual: **2**  
One side of mouth is use for the test group and other side for the control group.

**Randomization (investigator's opinion)**  
Randomized

**Randomization description**  
Based on the dice roll, one side of the jaw will select for laser treatment and the other side will select as the control group.

**Blinding (investigator's opinion)**  
Single blinded

**Blinding description**  
Both the operator and the patient wear goggles and apply a low-power laser treatment area for 100 seconds on the buccal and lingual / palatal flap surfaces from a distance of 3 mm. In the control group, the laser is used in the same way, but in off mode.

**Placebo**  
Used

**Assignment**  
Parallel

**Other design features**

**Secondary Ids**  
empty

## Ethics committees

### 1

#### Ethics committee

##### Name of ethics committee

Ethics Committee of Ahwaz Jundishapur University of Medical Sciences

##### Street address

golestan, esfand street

##### City

ahvaz

##### Province

Khouzestan

##### Postal code

6135715775

#### Approval date

2020-10-31, 1399/08/10

#### Ethics committee reference number

IR.AJUMS.REC.1399.632

## Health conditions studied

### 1

#### Description of health condition studied

low level laser therapy

#### ICD-10 code

Z98.818

#### ICD-10 code description

Other dental procedure status

## Primary outcomes

### 1

#### Description

visual analog scale (VAS)of pain

#### Timepoint

Day 1 to 7 after surgery.

#### Method of measurement

Visual Analogue Scale Questionnaire to assess pain in days 1 to 7 after surgery

### 2

#### Description

Number of analgesic drugs consumption per day

#### Timepoint

day 1 to 7 after surgery.

#### Method of measurement

Questionnaire on the number of analgesics used in days 1 to 7 after surgery

## Secondary outcomes

empty

## Intervention groups

## 1

### Description

Intervention group: treated by low level laser therapy. Both the operator and the patient wear goggles, and in the treatment area, a low-level 980 and 810 nm quick lase laser with a power of 0.5 watts by continuous whitening handpiece for 100 seconds on the buccal and lingual / palatal flap surfaces from a distance 3 mm is used. Finally, the flap edges are surgically returned to the teeth and bones and sutured with simple or sling sutures with 0-4 silk thread.

### Category

Treatment - Surgery

## 2

### Description

Control group: low level laser therapy in off mode. Both the operator and the patient wear goggles, and in the low-power laser treatment area of 980 and 810 nm, the quick lase is applied in off mode for 100 seconds on the buccal and lingual / palatal flap surfaces from a distance of 3 mm. Finally, the flap edges are surgically returned to the teeth and bones and sutured with simple or sling sutures with 0-4 silk thread.

### Category

Treatment - Surgery

## Recruitment centers

## 1

### Recruitment center

#### Name of recruitment center

Ahvaz Jundishapour University of medical and science ,school of dentistry

#### Full name of responsible person

Ali Yazdanpanah

#### Street address

golestan, esfand street, school of dentistry

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#### Province

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#### Postal code

6135715775

#### Phone

+98 61 3320 5168

#### Email

aliyz.00071@gmail.com

## Sponsors / Funding sources

## 1

### Sponsor

#### Name of organization / entity

Ahvaz University of Medical Sciences

#### Full name of responsible person

Dr Mehdi Ahmadimoghadam

#### Street address

golestan, esfand street, ahvaz jundishapur university of medical and sciences

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#### Province

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#### Postal code

6135715794

#### Phone

+98 61 3373 8383

#### Email

ahmadi-m@ajums.ac.ir

#### Grant name

Faculty members grant.

#### Grant code / Reference number

#### Is the source of funding the same sponsor organization/entity?

Yes

#### Title of funding source

Ahvaz University of Medical Sciences

#### Proportion provided by this source

100

#### Public or private sector

Public

#### Domestic or foreign origin

Domestic

#### Category of foreign source of funding

empty

#### Country of origin

#### Type of organization providing the funding

Academic

## Person responsible for general inquiries

### Contact

#### Name of organization / entity

Ahvaz University of Medical Sciences

#### Full name of responsible person

Dr Azarnoosh Ariankia

#### Position

Associate professor

#### Latest degree

Medical doctor

#### Other areas of specialty/work

Dentistry

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golestan, esfand street, school of dentistry

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## Person responsible for scientific inquiries

### Contact

**Name of organization / entity**

Ahvaz University of Medical Sciences

**Full name of responsible person**

Dr Leila Golpasandhagh

**Position**

Associate professor

**Latest degree**

Specialist

**Other areas of specialty/work**

periodontics

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**Sharing plan****Deidentified Individual Participant Data Set (IPD)**

Yes - There is a plan to make this available

**Study Protocol**

Yes - There is a plan to make this available

**Statistical Analysis Plan**

Yes - There is a plan to make this available

**Informed Consent Form**

No - There is not a plan to make this available

**Clinical Study Report**

Not applicable

**Analytic Code**

Not applicable

**Data Dictionary**

Not applicable

**Title and more details about the data/document**

visual analog scale

**When the data will become available and for how long**

Access period starts 6 months after the results are published.

**To whom data/document is available**

Researchers working in academic and scientific institutions

**Under which criteria data/document could be used**

Researchers working in academic and scientific institutions

**From where data/document is obtainable**

dr ali yazdanpanah 00989177043707

**What processes are involved for a request to access data/document**

call 00989177043707

**Comments****Person responsible for updating data****Contact****Name of organization / entity**

Ahvaz University of Medical Sciences

**Full name of responsible person**

Ali Yazdanpanah

**Position**

Post graduated student of periodontics

**Latest degree**

Medical doctor

**Other areas of specialty/work**

Dentistry

**Street address**

Ahvaz jundishapour university of medical and sciences,school of dentistry, department of periodontics

**City**

Ahvaz

**Province**