

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 2026

### The effect of low laser therapy on gingival crevicular fluid (GCF) level of IL-6 and IL-8 during orthodontic treatment

#### Protocol summary

##### Summary

Objective: The effect of low laser therapy on gingival crevicular fluid (GCF) level of IL-6 and IL-8 during orthodontic treatment; design: Randomized. Setting and conduct: After compilation of SRP the orthodontic treatments will be started. Low Level laser irradiation will be done in 0,2,7, 21 days and GCF will be collected with paper cone in distal sulcus of canine. Then all of the samples will be transferred to laboratory. Inclusion criteria: patients with healthy general condition and healthy periodontal tissue, patients with crowding or protrusion, that they need fix orthodontic treatment. Exclusion criteria: Patients with particular systemic diseases; Patients under treatment with special medication; Smokers and patients consume alcohol; Patients that received systemic antibiotics during the past six month, plaque index < %40. Intervention: Treatment with diod laser. main outcome measures: IL-6, IL-8

#### General information

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT2016071328914N1**

Registration date: **2016-08-08, 1395/05/18**

Registration timing: **retrospective**

Last update:

Update count: **0**

##### Registration date

2016-08-08, 1395/05/18

##### Registrant information

##### Name

Farid Mohammadi

##### Name of organization / entity

Islamic Azad University of Isfahan (Khorasgan), Dental

School

##### Country

Iran (Islamic Republic of)

##### Phone

+98 31 3535 4053

##### Email address

farid.mohammadi@khuif.ac.ir

##### Recruitment status

**Recruitment complete**

##### Funding source

investigator

##### Expected recruitment start date

2015-03-21, 1394/01/01

##### Expected recruitment end date

2016-02-19, 1394/11/30

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

##### Scientific title

The effect of low laser therapy on gingival crevicular fluid (GCF) level of IL-6 and IL-8 during orthodontic treatment

##### Public title

The effect of low laser therapy on gingival crevicular fluid (GCF) level of inflammation mediators during orthodontic treatment

##### Purpose

Treatment

##### Inclusion/Exclusion criteria

Inclusion criteria: patients with healthy general condition and healthy periodontal tissue; patients with crowding or protrusion that need fix orthodontic treatment. Exclusion criteria: Patients with systemic diseases; Patients under treatment with special medication; Smokers and patients consume alcohol; Patients that received systemic antibiotics during the past six months; plaque index <

%40

### Age

From **82 years** old to **80 years** old

### Gender

Both

### Phase

N/A

### Groups that have been masked

*No information*

### Sample size

Target sample size: **10**

### Randomization (investigator's opinion)

Randomized

### Randomization description

### Blinding (investigator's opinion)

Not blinded

### Blinding description

### Placebo

Not used

### Assignment

Parallel

### Other design features

simple random

## Secondary Ids

empty

## Ethics committees

### 1

#### Ethics committee

##### Name of ethics committee

Ethics committee of Islamic Azad University of Isfahan (Khorasgan), Dental School

##### Street address

Islamic Azad University of Isfahan (Khorasgan), Jay Street

##### City

Isfahan

##### Postal code

##### Approval date

2016-04-12, 1395/01/24

##### Ethics committee reference number

IR.mui.rec.1395.4.11

## Health conditions studied

### 1

#### Description of health condition studied

tooth movement

#### ICD-10 code

Z01.2

#### ICD-10 code description

Dental examination

## Primary outcomes

### 1

#### Description

IL-6

#### Timepoint

2,4, 9, 23 days

#### Method of measurement

Perticular kit of elisa

### 2

#### Description

IL-8

#### Timepoint

2,4, 9, 23 days

#### Method of measurement

Perticular kit of elisa

## Secondary outcomes

empty

## Intervention groups

### 1

#### Description

control: no Laser, orthodontics therapy

#### Category

Treatment - Other

### 2

#### Description

Intervention: laser therapy, orthodontics treatment

#### Category

Treatment - Other

## Recruitment centers

### 1

#### Recruitment center

##### Name of recruitment center

Dept. of Periodontics, Islamic Azad Dental School Khorasgan Branch, Isfahan, Iran

##### Full name of responsible person

Farid Mohammadi

##### Street address

##### City

Isfahan

## Sponsors / Funding sources

### 1

#### Sponsor

##### Name of organization / entity

Vice Chancellor for research of Islamic Azad University Isfahan (Khorasgan)

##### Full name of responsible person

Dr Vahid Esfahanian

**Street address**

Islamic Azad University of Isfahan (Khorasgan), Dental School

**City**

Isfahan

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

Yes

**Title of funding source**

Vice Chancellor for research of Islamic Azad University Isfahan (Khorasgan)

**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**

Islamic Azad University of Isfahan (Khorasgan), Dental School

**Full name of responsible person**

Farid Mohammadi

**Position**

phd

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faridbn2000@yahoo.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*