Clinical Trial Protocol
Iranian Registry of Clinical Trials

16 Sep 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 transfered to laboratory. Inclusion criteria: patients with healthy general conditionand 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@khuisf.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 committe 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
Other areas of specialty/work
Street address
Islamic Azad University of Isfahan (Khorasgan), Jay Street
City
Isfahan
Postal code
Phone
+98 31 3535 4053
Fax
Email
farid.mohammadi@khuisf.ac.ir; faridbn2000@yahoo.com
Web page address

Person responsible for scientific inquiries

Contact
Name of organization / entity
Islamic Azad University of Isfahan (Khorasgan), Dental School
Full name of responsible person
Farid Mohammadi
Position
phd
Other areas of specialty/work
Street address
Islamic Azad University of Isfahan (Khorasgan), Jay Street
City
Isfahan
Postal code
Phone
+98 31 3535 4053
Fax
Email
farid.mohammadi@khuisf.ac.ir; faridbn2000@yahoo.com
Web page address

Person responsible for updating data

Contact
Name of organization / entity
Islamic Azad University of Isfahan (Khorasgan), Dental School
Full name of responsible person
Farid Mohammadi
Position
phd
Other areas of specialty/work
Street address
Islamic Azad University of Isfahan (Khorasgan), Jay Street
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farid.mohammadi@khuisf.ac.ir; 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