Clinical Trial Protocol
Iranian Registry of Clinical Trials

13 Nov 2026

The Effect of Low Level Diode Laser (810nm) Therapy on CV-24 Acupuncture Point in Controlling Gag Reflex of Patients during Intraoral Radiographs

Protocol summary

Study aim

1-Determining the effectiveness of low diode laser in inhibiting nausea reaction in patients between 18 and 50 years old with mild, moderate and severe gag reflex requiring periapical (PA) intraoral radiographs

Design

Cross-sectional clinical trial in a single blind with a sample size of 35 people

Settings and conduct

The present study will be performed at Zanjan Dental School on 35 patients between 18 and 50 years old who have referred for periapical radiography of maxillary posterior teeth. In this study, after obtaining informed consent to participate in the study from clients, in order to eliminate the effect of anxiety as a disturbing factor, patients' level of anxiety is first determined by the Corah Dental Anxiety Scale and only people with the same level of anxiety should be included in the study. Two radiographs will be taken from each person. The first graphic will be done by placing the laser probe on the CV-24 acupuncture point (without laser radiation) and the second graphic after the low-power laser irradiation will be done on the CV-acupuncture point. 24 will be prepared

Participants/Inclusion and exclusion criteria

Sample inclusion criteria: being 18 to 50 years old / need to prepare intraoral radiographs for diagnosis and dental treatment / nausea during radiography / not pregnant / not breastfeeding

Intervention groups

Two radiographs will be taken from each person. The first graphic will be taken by placing the laser device probe on the CV-24 acupuncture point (without laser radiation) and the second graphic will be prepared after the low-power laser irradiation on the CV-24 acupuncture point

Main outcome variables

Anxiety and fear caused by dental procedures; Inhibition of gag reflex

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20211217053437N1**
Registration date: **2021-12-23, 1400/10/02**
Registration timing: **prospective**

Last update: **2021-12-23, 1400/10/02**
Update count: **0**

Registration date

2021-12-23, 1400/10/02

Registrant information

Name

Robab Noormohammadi

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 24 3336 9810

Email address

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2021-12-27, 1400/10/06

Expected recruitment end date

2022-01-26, 1400/11/06

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date
empty

Scientific title
The Effect of Low Level Diode Laser (810nm) Therapy on CV-24 Acupuncture Point in Controlling Gag Reflex of Patients during Intraoral Radiographs

Public title
The Effect of Low Level Diode Laser (810nm) Therapy on CV-24 Acupuncture Point in Controlling Gag Reflex

Purpose
Prevention

Inclusion/Exclusion criteria
Inclusion criteria:
Need to prepare intraoral radiographs for diagnosis and dental treatment Suffering from gag reflex while taking radiographs Having satisfaction
Exclusion criteria:
being during breastfeeding Being pregnant

Age
From **18 years** old to **50 years** old

Gender
Both

Phase
N/A

Groups that have been masked

- Participant

Sample size
Target sample size: **35**

Randomization (investigator's opinion)
N/A

Randomization description

Blinding (investigator's opinion)
Single blinded

Blinding description
The present study will be performed as a one-way blind clinical trial (participants only). Two radiographs will be taken from each person. The first graphic will be taken by placing the laser device probe on the CV-24 acupuncture point (without laser radiation) and the second graphic will be prepared after the low-power laser irradiation on the CV-24 acupuncture point. will be

Placebo
Used

Assignment
Crossover

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Ethics committee of Zanjan University of Medical Sciences
Street address
Zanjan University of Medical Sciences , Azadi Square, Zanjan, Iran
City
Zanjan
Province
Zanjan
Postal code
4514685748

Approval date
2021-12-06, 1400/09/15

Ethics committee reference number
IR.ZUMS.REC.1400.383

Health conditions studied

1

Description of health condition studied
Gag reflex

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description
Gag reflex rate based on Classification of Gagging Problem index

Timepoint
Before the intervention, after the placebo intervention, after the actual intervention

Method of measurement
Classification of Gagging Problem

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group: Selected specimens require periapical radiographs of the maxillary posterior teeth on both sides for dental diagnosis and treatment, and also have mild, moderate, or severe nausea reflexes based on the GFP classification index. After obtaining informed consent to participate in the study from the clients, two radiographs will be taken from each person. The first radiograph by placing the laser probe on the CV-24 acupuncture point (without laser radiation) and the second radiograph after laser irradiation CV-24 will be prepared at the acupuncture point. The laser used is a diode laser (Elexxion) with a continuous wavelength of 810nm. The tip of the probe rests on the skin at point CV-24 and is projected at 300 mW for 60 seconds. CV-24 is the point on the face in the center of the mentholabial groove, between the lower lip and chin.

Category

Prevention

Recruitment centers

1

Recruitment center

Name of recruitment center
Zanjan Dentistry School

Full name of responsible person
Robab Noormohammadi

Street address
School of Dentistry, Central Campus of Zanjan University of Medical Sciences, Above Ayatollah Mousavi Hospital, Dr. Sabouti Blvd., Zanjan

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Zanjan University of Medical Sciences

Full name of responsible person
Alireza Shoghly

Street address
School of Dentistry, Central Campus of Zanjan University of Medical Sciences, Above Ayatollah Mousavi Hospital, Dr. Sabouti Blvd., Zanjan

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Grant name

Grant code / Reference number

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

Title of funding source
Zanjan 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
Zanjan University of Medical Sciences

Full name of responsible person
Robab Noormohammadi

Position
Associate professor

Latest degree
Specialist

Other areas of specialty/work
Dentistry

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Person responsible for scientific inquiries

Contact

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Robab Noormohammadi

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Person responsible for updating data

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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
Yes - There is a plan to make this available

Clinical Study Report
Yes - There is a plan to make this available

Analytic Code
Yes - There is a plan to make this available

Data Dictionary
Yes - There is a plan to make this available

Title and more details about the data/document
All data is potentially shareable after unidentified individuals

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
The data will be available only to researchers working in academic and scientific institutions

Under which criteria data/document could be used
Any kind of statistical analysis is allowed on the delivered data

From where data/document is obtainable
Dr.Robab Noormohammadi
dr.noormohammadi@zums.ac.ir

What processes are involved for a request to access data/document
The applicant can submit his / her request via the said email. The requested files will be sent to him as soon as possible.

Comments