

Clinical Trial Protocol

Iranian Registry of Clinical Trials

11 Jul 2026

Comparison between the effect of physiotherapy and Laser Therapy on the management of temporomandibular joint disorders

Protocol summary

Study aim

Compare effectiveness of trans cutaneous electrical nerve stimulation(TENS) and low level laser therapy(LLLT) in temporomandibular joint disorder(TMD) patients who don't response to pharmacological therapy.

Design

Clinical trial with parallel group, single blind, Block randomized.

Settings and conduct

Patients referred to the Oral medicine Department of Shiraz Dental school, receive laser and TENS treatment by one person in block randomization method. The examiner who records the data, is blind.

Participants/Inclusion and exclusion criteria

"Inclusion criteria:Patients have pain in temporomandibular joint regions and muscles; with or without noise in joints ; with or without limitation in jaw movements" "Exclusion criteria: patient with systemic disease and medicine usage"

Intervention groups

"Intervention group1:TENS. TENS (NEURDYN) is applied for 8 consecutive sessions for 2 weeks, 20 minutes on painful muscle." "Intervention group 2: Laser. low-power laser (AZOR) is applied for 10 sessions, every other day, with a dose of 12 J / cm² on the muscle and joint."

Main outcome variables

Pain; Function

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20130521013406N4**

Registration date: **2019-04-10, 1398/01/21**

Registration timing: **retrospective**

Last update: **2019-04-10, 1398/01/21**

Update count: **0**

Registration date

2019-04-10, 1398/01/21

Registrant information

Name

Fahimeh Rezazadeh

Name of organization / entity

Dental school of shiraz university of medical science

Country

Iran (Islamic Republic of)

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+98 71 1628 9917

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rezazadehf@sums.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2018-09-23, 1397/07/01

Expected recruitment end date

2018-11-22, 1397/09/01

Actual recruitment start date

2018-09-23, 1397/07/01

Actual recruitment end date

2019-01-06, 1397/10/16

Trial completion date

2019-02-20, 1397/12/01

Scientific title

Comparison between the effect of physiotherapy and Laser Therapy on the management of temporomandibular joint disorders

Public title

Comparison between the effect of physiotherapy and Laser on the treatment of temporomandibular joint disorder

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Patients have pain in TMJ regions and muscles with or without noise in joints and with or without limitation in jaw movements

Exclusion criteria:

Missing of five or more posterior teeth (except for third molars) Systemic diseases

Age

No age limit

Gender

Both

Phase

N/A

Groups that have been masked

- Outcome assessor

Sample size

Target sample size: **30**

Actual sample size reached: **30**

Randomization (investigator's opinion)

Randomized

Randomization description

The method is Block randomization . Each block with 4 allocations, consisting 2 allocation for intervention and 2 for control group will be considered. Six possible sequence of treatment allocation in each block will be listed and each one will be written on a card. Each time a block will be selected and the sequence of treatment will be registered until the treatment allocations become completed for all 30 participants (8 blocks). The randomization was performed by a methodologist. Allocation concealment will be done by the main researcher. On each 30 cards a sequence will be written and sealed. Pockets will be put in a box. A pocket will be allocated for each participant based on order of enrollment.

Blinding (investigator's opinion)

Single blinded

Blinding description

In this study, the examiner is blind. In this way, the examiner or data collector, during pain and joint function examination, is not aware of the type of treatment that patients receive when assessing pain and function. But the patient and the main investigator who applies the treatment, are not blind.

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics committee of Shiraz University of Medical Sciences

Street address

Medical Science Building,Zand Street,Namazee Square,Shiraz

City

Shiraz

Province

Fars

Postal code

71345-54213

Approval date

2015-11-11, 1394/08/20

Ethics committee reference number

93-01-03-8636

Health conditions studied

1

Description of health condition studied

Temporomandibular joint disorder

ICD-10 code

M25.8

ICD-10 code description

Other specified joint disorders

Primary outcomes

1

Description

Pain

Timepoint

Each treatment session

Method of measurement

Visual analogue scale

2

Description

Function

Timepoint

Before and After the intervention

Method of measurement

Helkimo index

Secondary outcomes

empty

Intervention groups

1

Description

"Intervention group1: TENS" Physiotherapy with TENS (NEURDYN) equipment is performed for 8 sessions(4 consecutive days per week) within 2 weeks. Carbon electrodes (6.5×4.5cm) are placed on the tender and painful muscles with 75 HZ frequency and 0.75

millisecond pulse width for 20 minutes per session.

Category

Treatment - Devices

2

Description

"Intervention group2: Low level laser"Low-power lasers with Azore device apply every other day for 10 sessions, with a dose of 12 J / cm 2 on a temporal joint.

Category

Treatment - Devices

Recruitment centers

1

Recruitment center

Name of recruitment center

Shiraz Dental School

Full name of responsible person

Khadijeh Hajian

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Shiraz dental school,Ghasrodasht Street,Ghom abad,Shiraz

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Shiraz University of Medical Sciences

Full name of responsible person

Ali hashemi

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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

Shiraz 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

Shiraz University of Medical Sciences

Full name of responsible person

Khadijeh Hajian

Position

Assistant professor

Latest degree

Specialist

Other areas of specialty/work

Dentistry

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Person responsible for scientific inquiries

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Full name of responsible person

Fahimeh rezazadeh

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Sharing plan

Deidentified Individual Participant Data Set (IPD)

Undecided - It is not yet known if there will be a plan to make this available

Study Protocol

Yes - There is a plan to make this available

Statistical Analysis Plan

Not applicable

Informed Consent Form

Undecided - It is not yet known if there will be a plan to make this available

Clinical Study Report

Yes - There is a plan to make this available

Analytic Code

Not applicable

Data Dictionary

Not applicable

Title and more details about the data/document

Only part of the information, such as information on the main outcome or such this,, can be shared

When the data will become available and for how long

Start the access period from 2019

To whom data/document is available

Only for researchers working in academic and scientific institutions

Under which criteria data/document could be used

For clinical use, it could be used through the responsible person .

From where data/document is obtainable

Khadijeh hajian with phone number 09177025755

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

Once requested, it takes 3 to 6 months to access the data .

Comments