Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Comparing the effect of 808nm low-level laser and dry needling in the treatment of trigger point in patients with MPDS

Protocol summary

Study aim
Comparison of the effect of 808 nm low-power laser and dry needling on treatment of trigger points in patients with myofascial pain syndrome (MPDS)

Design
A clinical trial has two groups of treatment with parallel randomized groups

Settings and conduct
A total of 42 who are having Myofascial Pain Syndrome(MPDS) and who have criteria for entering the study are selected.A clinical examination is conducted by a specialist assistant in oral diseases under the supervision of Professor of Oral Medicine. The pain status at the patient's trigger points is recorded based on the VAS criteria in the initial examination, called VAS1.Patients are randomly divided into two groups of 21 patients. In the two treatment groups, muscle trigger points are used, which requires finding trigger points in the muscles.Muscles that are commonly used in trigger therapy include temporalis,mast, and external trigoid.Low-power laser GA-AL-AS lasers with a wavelength of 808 nm and a power of 0.5 watts for 60 seconds, with a power of 30 J at any point of the trigger and in the form of a continuous wave.In the other group, treatment is performed by dry needle in muscle trigger points.

Participants/Inclusion and exclusion criteria
Entry requirements: Age over 18 years The presence of a trigger point in the temporal muscle and / or the external master and / or trigoid that has been previously indicated by touch Non-arrival conditions: Use of analgesics, muscle relaxants, anti-inflammatory drugs and benzodiazepines Needle Foobia Hemorrhagic disordersMetabolic diseases (diabetes) and vascular. Neurological disorders (Trigeminal neuralgia)- Pregnancy. Receiving any treatment for temporomandibular joint disorder

Intervention groups
Trigger point therapy of by low level laser 808 nmand dry needling

Main outcome variables
Reducing pain in the muscle trigger points Reduce the number of muscle trigger points

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20190523043679N1**
Registration date: **2019-08-19, 1398/05/28**
Registration timing: **retrospective**

Last update: **2019-08-19, 1398/05/28**
Update count: **0**

Registration date
2019-08-19, 1398/05/28

Registrant information

Name
Azin Khodabakhshi

Name of organization / entity

Country
Iran (Islamic Republic of)

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+98 21 4604 3561

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Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2018-06-22, 1397/04/01

Expected recruitment end date
2019-06-22, 1398/04/01

Actual recruitment start date
empty

Actual recruitment end date
empty
Trial completion date
empty

Scientific title
Comparing the effect of 808nm low-level laser and dry needling in the treatment of trigger point in patients with MPDS

Public title
Treating muscle pain by low-power laser and dry needle
Purpose
Treatment
Inclusion/Exclusion criteria
Inclusion criteria:
Age over 18 years The presence of a trigger point in the temporal muscle and / or the external master and / or trigoid that has already been marked with a touch
Exclusion criteria:
Use of analgesics, muscle relaxants, anti-inflammatory drugs and benzodiazepines Fear of the needle Bleeding disorders Metabolic (diabetes) and vascular diseases Neurological disorders (trigeminal neuralgia). Pregnancy Get any treatment for temporomandibular joint disorder
Age
From **18 years** old
Gender
Both

Phase
N/A
Groups that have been masked
No information
Sample size
Target sample size: **42**
Randomization (investigator's opinion)
Not randomized
Randomization description
Blinding (investigator's opinion)
Not blinded
Blinding description
Placebo
Not used
Assignment
Parallel
Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
National Ethics Committee of Shahid Beheshti University of Medical Sciences
Street address
Sardar St. South Jungle End of Sadra
City
Tehran
Province
Tehran
Postal code
6581864858
Approval date
2019-01-19, 1397/10/29
Ethics committee reference number
IR.SBMU.DRC.REC.1397.046

Health conditions studied

1

Description of health condition studied
Myofascial pain syndrome
ICD-10 code
ICD-10 code description

Primary outcomes

1

Description
The amount of pain in the triage of the masticatory muscles
Timepoint
Before and after each treatment and after ten days and one month
Method of measurement
by VAS

2

Description
Maximum opening of the mouth without pain
Timepoint
Before and after each treatment and after ten days and one month
Method of measurement
By the ruler, the distance between the anisal edges of the anterior teeth is measured

3

Description
Number of muscle trigger points
Timepoint
Before and after each treatment and after ten days and one month
Method of measurement
Clinical examination

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group: Treatment of muscle trigger points by low-power laser 808 nm

Category

Treatment - Devices

2

Description

Intervention group: Treating muscle trigger points by dry needling

Category

Treatment - Devices

Recruitment centers

1

Recruitment center

Name of recruitment center

Faculty of Dentistry, Shaheed Beheshti Department of Oral and Maxillofacial Medicine

Full name of responsible person

Maryam Baharvand

Street address

Evin Blvd Student, Shahid Beheshti Dental School

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Shahid Beheshti University of Medical Sciences

Full name of responsible person

Dr. Afshin Zarghi

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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

Shahid Beheshti 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

Shahid Beheshti University of Medical Sciences

Full name of responsible person

Maryam Baharvand

Position

Professor

Latest degree

Specialist

Other areas of specialty/work

Dentistry

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Person responsible for updating data

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Position
resident
Latest degree
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Sharing plan

Deidentified Individual Participant Data Set (IPD)
Yes - There is a plan to make this available
Study Protocol
Undecided - It is not yet known if there will be a plan to make this available
Statistical Analysis Plan
No - There is not a plan to make this available
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
No - There is not a plan to make this available
Data Dictionary
No - There is not a plan to make this available
Title and more details about the data/document
All data and study data may be published
When the data will become available and for how long
Starting the access period from 2019
To whom data/document is available
Researchers working in academia and academia
Under which criteria data/document could be used
Researchers working in academia and academia
From where data/document is obtainable
Researchers working in academia and academics will email the person in charge and request information.
What processes are involved for a request to access data/document
Researchers working in academia and academics will email the person in charge and request information.
Comments