

Clinical Trial Protocol

Iranian Registry of Clinical Trials

03 Jul 2026

The effectiveness of intra-articular Triamcinolone injection compared to 940nm diod laser therapy in the treatment of temporomandibular joint disorder (TMD) signs.

Protocol summary

Study aim

Comparison the efficacy of intra-articular triamcinolone injection and laser treatment on Improving the Symptoms of Temporomandibular Joint Disorders(TMD)

Design

Patients are randomly divided into two 33-member group. Random allocation will be done through block randomization method.

Settings and conduct

Patient with TMD referring to facial and maxillofacial surgery centers in Hamedan

Participants/Inclusion and exclusion criteria

Inclusion Criteria was Patients with symptoms of TMD including pain; joint sound; limitation of mouth opening and jawbone deviation during opening mouth through clinical examinations and Exclusion Criteria was Age younger than 20 or older than 40; History of any surgery or intervention in the TMJ joint; History of connective tissue or joints disease such as lupus; scleroderma; vasculitis and etc; History of long-term use of corticosteroids and anti-inflammatory drugs.

Intervention groups

Intervention group 1: Treatment included cleaning the skin of the injection area with alcoholic pad and injecting 1 ml of Lidocaine 2% to desensitize the area, asking the patient to open his mouth to the maximum possible size and injecting 0.5 ml of triamcinolone into posterior disk space. Needle gage 27was used for injection.
Intervention group: 940 nm diode laser was used to radiate point by point at the head of condyle from superior, inferior, anterior and posterior sides for 50 seconds. The intervention was run through 9 sessions (One day in between). Patients received high power laser (4 watts) in the first session. In the other sessions low power laser (0.5 watts) was used.

Main outcome variables

Pain, joint clicks

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20180504039522N2**

Registration date: **2018-07-09, 1397/04/18**

Registration timing: **registered_while_recruiting**

Last update: **2018-07-09, 1397/04/18**

Update count: **0**

Registration date

2018-07-09, 1397/04/18

Registrant information

Name

Ali Heidari

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 81 3838 0320

Email address

ali.heidari68@umasha.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2018-06-22, 1397/04/01

Expected recruitment end date

2018-09-23, 1397/07/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effectiveness of intra-articular Triamcinolone injection compared to 940nm diod laser therapy in the treatment of temporomandibular joint disorder (TMD) signs.

Public title

The Effect of Triamcinolone Injection and Diode Laser on Improving the Symptoms of Temporomandibular Joint Disorders

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Patients with symptoms of TMD including pain, joint sound, limitation of mouth opening and jawbone deviation during mouth opening through clinical examinations

Exclusion criteria:

Age younger than 20 or older than 40 History of any surgery or intervention in the TMJ joint History of connective tissue or joints disease such as lupus, scleroderma, vasculitis, etc. History of long-term use of corticosteroids and anti-inflammatory drugs.

Age

From **20 years** old to **40 years** old

Gender

Both

Phase

3

Groups that have been masked

No information

Sample size

Target sample size: **66**

Randomization (investigator's opinion)

Randomized

Randomization description

Random allocation will be done through block randomization method.

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

Ethics committee of Hamadan University of Medical Sciences

Street address

Hamadan University of Medical Sciences, Shahid

Fahmideh Blvd.

City

Hamadan

Province

Kohgiluyeh-va-Boyerahmad

Postal code

65156

Approval date

2018-01-13, 1396/10/23

Ethics committee reference number

IR.UMSHA.REC.1396.721

Health conditions studied

1

Description of health condition studied

temporomandibular joint disorder (TMD)

ICD-10 code

M26.60

ICD-10 code description

Temporomandibular joint disorder, unspecified

Primary outcomes

1

Description

Pain

Timepoint

Before treatment, one week later and one month later

Method of measurement

Visual Analog Scale(VAS)

2

Description

Joint click

Timepoint

Before treatment, one week later and one month later

Method of measurement

Visual Analog Scale(VAS)

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group 1: Treatment included cleaning the skin of the injection area with alcoholic pad and injecting 1 ml of Lidocaine 2% to desensitize the area, asking the patient to open his mouth to the maximum possible size and injecting 0.5 ml of triamcinolone into posterior disk space. Needle gage 27was used for injection.

Category

Treatment - Drugs

2

Description

Intervention group 2: 940 nm diode laser was used to radiate point by point at the head of condyle from superior, inferior, anterior and posterior sides for 50 seconds. The intervention was run through 9 sessions (One day in between). Patients received high power laser (4 watts) in the first session. In the other sessions low power laser (0.5 watts) was used.

Category

Treatment - Drugs

Recruitment centers

1

Recruitment center

Name of recruitment center

Oral and Maxillofacial Surgery medical centers in Hamedan

Full name of responsible person

Mino0 Yavarikia

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Hamedan University of Medical Sciences

Full name of responsible person

Dr Saeed Bashirian

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Email

saeedBashirian@yahoo.com

Grant name

Grant code / Reference number

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

Yes

Title of funding source

Hamedan 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

Hamedan University of Medical Sciences

Full name of responsible person

Dr Ali Heidari

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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Latest degree

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Person responsible for updating data**Contact****Name of organization / entity**

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Full name of responsible person

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Latest degree

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Sharing plan**Deidentified Individual Participant Data Set (IPD)**

No - There is not a plan to make this available

Justification/reason for indecision/not sharing IPD

No more information

Study Protocol

No - There is not a plan to make this available

Statistical Analysis Plan

No - There is not 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

No - There is not a plan to make this available

Data Dictionary

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

Title and more details about the data/document

Only part of the original outcome information or the like can be shared.

When the data will become available and for how long

From the April first, 2019

To whom data/document is available

Data will be available for researchers working in academic and scientific institutions or industry professionals.

Under which criteria data/document could be used

Only published results from the Thesis can be used

From where data/document is obtainable

Dr ali Heidari dr-heidari68@hotmail.com

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

Send an email to dr-heidari68@hotmail.com and get up to 72 hours to receive the response

Comments