

Clinical Trial Protocol

Iranian Registry of Clinical Trials

18 Sep 2026

Comparison of physical therapy and splint therapy in the management of painful clicking of temporomandibular joints

Protocol summary

Summary

The aim of this study was to compare three treatment modalities (splint therapy, physical therapy and combination of splint and physical therapy) in improving the painful temporo-mandibular joint clicking. A total of 54 patients with the diagnosis of Temporo-mandibular Disorder (TMD) were randomly assigned into physical therapy, splint therapy and splint-physical therapy groups. The patients in Physical therapy group (n=20) were treated by three modalities including ultrasound, TENS and exercise therapy every other day for 4 weeks. The patients in splint therapy group (n=20) received anterior positioning splint therapy for three months. Patients in splint-Physical therapy group (n=14) underwent both treatments consecutively. After the treatment, the patients were followed for a month. The primary outcome was pain according to VAS and the presence of temporo-mandibular joint clicking.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201011205087N3**

Registration date: **2011-01-28, 1389/11/08**

Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2011-01-28, 1389/11/08

Registrant information

Name

Amirtaher Mirmortazavi

Name of organization / entity

Mashhad Dental School, department of Prosthodontics

Country

Iran (Islamic Republic of)

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Recruitment status

Recruitment complete

Funding source

Vice Chancellor of Mashhad University of Medical Sciences

Expected recruitment start date

2007-12-31, 1386/10/10

Expected recruitment end date

2009-12-31, 1388/10/10

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison of physical therapy and splint therapy in the management of painful clicking of temporomandibular joints

Public title

Comparison of three treatment options in the management of painful temporomandibular joint clicking: Randomised clinical trial

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: Presence of permanent, painful and intermediate clicking
Exclusion criteria: Intracapsular clicking, history of sinus disease, migraine, neuralgia, arthritis, ear infection or TMJ trauma, Orthodontic treatment, consumption of sedative drugs, muscle relaxant, or psychoactive using

Age

From **18 years** old to **60 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **50**

Randomization (investigator's opinion)

N/A

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

Ethics Committee of Mashhad University of Medical Sciences

Street address

Ghoreishi department, Daneshgah Ave, Mashhad

City

Mashhad

Postal code

Approval date

1990-01-01, 1368/10/11

Ethics committee reference number

1564

Health conditions studied

1

Description of health condition studied

Temporomandibular joint painful clicking

ICD-10 code

K07.6

ICD-10 code description

Temporomandibular joint disorders

Primary outcomes

1

Description

temporomandibular joint pain

Timepoint

before treatment - during treatment- after treatment

Method of measurement

due to VAS , patient's statement

2

Description

presence of temporomandibular clicking

Timepoint

before treatment - after treatment

Method of measurement

hearing click sound

Secondary outcomes

empty

Intervention groups

1

Description

Splint therapy, at nights, use of anterior positioning appliance for 3 month

Category

Treatment - Other

2

Description

Physical therapy modalities including Ultrasound, TENS and exercise therapy in one hour appointments, alternate days for 4 weeks

Category

Treatment - Other

3

Description

Update February 16, 2011: Physical therapy modalities including Ultrasound, TENS and exercise therapy in one hour appointments, alternate days for 4 weeks as well as Splint therapy, at nights, use of anterior positioning appliance for 3 months

Category

Other

Recruitment centers

1

Recruitment center

Name of recruitment center

Mashhad Dental School

Full name of responsible person

Amirtaher Mirmortazavi

Street address

Mashhad Dental School, Vakilabad Ave

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Vice Chancellor of Mashhad University of Medical Sciences

Full name of responsible person

Dr. Mohamad Ramezani

Street address

Ghoreishi department, Daneshgah Ave, Mashhad

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Mashhad

Grant name

Grant code / Reference number

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

Yes

Title of funding source

Vice Chancellor of Mashhad University of Medical Sciences

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

Mashhad Dental School

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Position

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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