

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

Investigating immediate effects of posterior-anterior lumbar mobilization with different amplitude on pressure pain threshold of patients with chronic non specific low back pain

Protocol summary

Study aim

Investigating effects of posterior-anterior lumbar mobilization with different amplitude on pressure pain threshold of patients with chronic non specific low back pain

Design

A controlled clinical trial via cross-over grouping with 28 participants.

Settings and conduct

In the first session, the subjects were placed in the prone position for 5 minutes as the control group, and pressure pain threshold (PPT) was measured in the left middle Deltoid region, fourth lumbar dermatome, first sacrum dermatome, and 3 cm right side of the fourth lumbar vertebra. In therapy group, the subjects had posterior-anterior lumbar vertebrae mobilization technique with three high, low and relatively static amplitudes. PPT was measured before and after mobilization. To calculate force applied, we placed a weight gauge below the abdomen of patients. The study was performed in school of rehabilitation of Tehran university of medical science. Our study is not blinded.

Participants/Inclusion and exclusion criteria

inclusion criteria: suffering chronic nonspecific low back pain, Pain at the beginning of study between: 3-6 according to visual analog scale, age ranges between 18 to 45 years, Male participants only, experiencing back pain for more than 3 months, Body mass index below 28. exclusion criteria: Existence of deviation in alignment of vertebral column, Radiating pain from low back region to lower extremity

Intervention groups

therapy group 1: posterior-anterior mobilization lumbar spine with high amplitude therapy group 2: posterior-anterior mobilization lumbar spine with low amplitude therapy group3: posterior-anterior mobilization lumbar spine with static amplitude We used Pisiform grip

technique for lumbar mobilization in this study. control group: first, participants sustained prone position for five minutes after that we performed assessment.

Main outcome variables

Pressure Pain Threshold

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20190818044558N1**

Registration date: **2020-01-12, 1398/10/22**

Registration timing: **retrospective**

Last update: **2020-01-12, 1398/10/22**

Update count: **0**

Registration date

2020-01-12, 1398/10/22

Registrant information

Name

Mohammad reza Khanmohammadi

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 21 6662 4672

Email address

mr-khanmohammadi@razi.tums.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2016-05-21, 1395/03/01

Expected recruitment end date

2016-07-22, 1395/05/01

Actual recruitment start date

2016-05-21, 1395/03/01

Actual recruitment end date

2016-08-15, 1395/05/25

Trial completion date

2016-08-15, 1395/05/25

Scientific title

Investigating immediate effects of posterior-anterior lumbar mobilization with different amplitude on pressure pain threshold of patients with chronic non specific low back pain

Public title

Manual therapy techniques in low back pain

Purpose

Supportive

Inclusion/Exclusion criteria**Inclusion criteria:**

suffering chronic nonspecific low back pain Pain at the beginning of study between: 3-6 according to visual analog scale age ranges between 18 to 45 years Male participants only experiencing back pain for more than 3 months Body mass index below 28

Exclusion criteria:

Existence of deviation in alignment of vertebral column
Radiating pain from low back region to lower extremity

Age

From **18 years** old to **45 years** old

Gender

Male

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **25**

Actual sample size reached: **28**

Randomization (investigator's opinion)

Not randomized

Randomization description**Blinding (investigator's opinion)**

Not blinded

Blinding description**Placebo**

Not used

Assignment

Crossover

Other design features**Secondary Ids**

empty

Ethics committees**1****Ethics committee****Name of ethics committee**

Ethics committee of Tehran University of Medical Sciences

Street address

Tehran University of Medical Science main building,
Kehavarz Blvd, Qods Ave, Tehran, Iran.

City

Tehran

Province

Tehran

Postal code

1417653761

Approval date

2015-11-25, 1394/09/04

Ethics committee reference number

IR.TUMS.REC.1394.1274

Health conditions studied**1****Description of health condition studied**

Chronic non-specific low back pain

ICD-10 code**ICD-10 code description****Primary outcomes****1****Description**

Pressure pain threshold

Timepoint

Before and immediately after performing the therapy procedure

Method of measurement

Pressure algometry according to newton scale

Secondary outcomes

empty

Intervention groups**1****Description**

Intervention group1: Fourth lumbar vertebra posterior-anterior mobilization with low amplitude (150-200 N). Patient were asked to go in prone position and after that the mobilization technique was applied to forth lumbar vertebrae. There was three different session of therapy. To prevent the carry-over effect, we implemented 48 hours rest between each session. To calculate precise amount of force applied, we placed a digital weight gauge below the abdomen of patients. We used Pisiform grip technique for lumbar mobilization in this study.

Category

Rehabilitation

2**Description**

Intervention group2: Fourth lumbar vertebra posterior-

anterior mobilization with high amplitude (50-200 N). Patient were asked to go in prone position and after that the mobilization technique was applied to forth lumbar vertebrae. There was three different session of therapy.To prevent the carry-over effect, we implemented 48 hours rest between each session.To calculate precise amount of force applied, we placed a digital weight gauge below the abdomen of patients. We used Pisiform grip technique for lumbar mobilization in this study.

Category

Rehabilitation

3

Description

Intervention group3: Fourth lumbar vertebra posterior-anterior mobilization with static amplitude (200 N). Patient were asked to go in prone position and after that the mobilization technique was applied to forth lumbar vertebrae. There was three different session of therapy. To prevent the carry-over effect, we implemented 48 hours rest between each session. To calculate precise amount of force applied, we placed a digital weight gauge below the abdomen of patients. We used Pisiform grip technique for lumbar mobilization in this study.

Category

Rehabilitation

4

Description

Control group: Sustaining prone position for five minutes

Category

N/A

Recruitment centers

1

Recruitment center

Name of recruitment center

Tehran University of Medical Sciences, School of rehabilitation science

Full name of responsible person

Mohammad Reza Khanmohammadi

Street address

Mohammad Reza Khanmohammadi, No 33, Mirghaderi alley, Gozalkhoue Street, south Mehr-abad district, Tehran, Iran

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Tehran University of Medical Sciences

Full name of responsible person

Dr.Mohammad Ali Sahraian

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Web page address

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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

Tehran 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

Tehran University of Medical Sciences

Full name of responsible person

Mohammad Reza Khanmohammadi

Position

Graduated, Not a faculty member

Latest degree

Master

Other areas of specialty/work

Physiotherapy

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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

No - There is not a plan to make this available

Informed Consent Form

No - There is not 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

Only a portion of the data such as main outcomes
information would be shared.

When the data will become available and for how long

Start of access period from March 2020.

To whom data/document is available

Scholars working in academic and scientific institutes
that have scientific merit.

Under which criteria data/document could be used

All statistical analysis on the data should be done under
my authority.

From where data/document is obtainable

Mohammad Reza Khanmohammadi Email:
m.reza_khanmohamadi@yahoo.com

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

They should email Mr. Khanmohammadi. After evaluating
their scientific competency, the data will send to them
during less than a week.

Comments

Nothing