Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 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)

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+98 21 6662 4672

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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

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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

Street address

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Person responsible for scientific inquiries

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Latest degree
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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