

Clinical Trial Protocol

Iranian Registry of Clinical Trials

22 Jul 2026

The effect of individualized core stability exercises on management of subacute and chronic low back pain with radiculopathy.

Protocol summary

Summary

The main objective of this study is investigation the effect of core stability exercises for management of radicular/discogenic low back pain. This is a quasi-experimental study. Twenty patients (between 18 to 65 years old) with a radicular low back pain for more than six weeks with a related annular tear or protrusion in the MRI without absolute or relative indications for surgery, will be recruited in the study. After related physical examinations, core stability exercises (may be modified based on patients' symptoms) will be prescribed for each patient. Iranian version of Roland Morris Disability questionnaire, WHOQOL: BREF questionnaire, Fear-Avoidance Beliefs questionnaire, and VAS will be completed by the participants at the beginning and eight weeks after the study. In addition, the thickness of lateral abdominal muscles and cross sectional area of paravertebral muscles will be measured via ultrasound at the beginning, four weeks and eight weeks after the study.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201502064231N3**

Registration date: **2015-02-21, 1393/12/02**

Registration timing: **prospective**

Last update:

Update count: **0**

Registration date

2015-02-21, 1393/12/02

Registrant information

Name

Pardis Noormohamadpour

Name of organization / entity

Sport Medicine Research Center, Tehran University of Medical Sciences

Country

Iran (Islamic Republic of)

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Recruitment status

Recruitment complete

Funding source

Tehran University of Medical Sciences

Expected recruitment start date

2015-04-04, 1394/01/15

Expected recruitment end date

2015-08-23, 1394/06/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of individualized core stability exercises on management of subacute and chronic low back pain with radiculopathy.

Public title

The effect of individualized core stability exercises on management of subacute and chronic low back pain with radiculopathy.

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: Patient should be between 18 to 65 years old; Having a radicular low back pain for more than six weeks with a related annular tear or protrusion in the MRI; Having a continus or intermittent radicular pain or parestesia in lower limbs which is related to the affected

disc levels. Exclusion criteria: Having absolute or relative indications for surgery such as cauda equina syndrome, paraparesis/paraplegia, and severe paresis or pain which has not improved over conservative treatments; Not complying with the rehabilitation program and continuing the study; Getting pregnant during the study; History of systemic disease affecting the musculoskeletal functions, musculoskeletal deformity or abnormality with possible influence on the thickness of lateral abdominal muscles or paravertebral muscles (such as muscular dystrophy, abdominal hernia, and scleroderma); History of lumbar surgery; History of lumbar malignancy.

Age

From **18 years** old to **65 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **20**

Randomization (investigator's opinion)

N/A

Randomization description

Blinding (investigator's opinion)

Not blinded

Blinding description

Placebo

Not used

Assignment

Single

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Tehran University of Medical Sciences and Health Services - Ethics committee

Street address

Faculty of Medicine, Tehran University of Medical Sciences, Keshavarz Blvd., Tehran

City

Tehran

Postal code

Approval date

2015-01-10, 1393/10/20

Ethics committee reference number

93-03-53-27292

Health conditions studied

1

Description of health condition studied

Diseases of the musculoskeletal system and connective tissue

ICD-10 code

M54.4

ICD-10 code description

Lumbago with sciatica

Primary outcomes

1

Description

Low back pain and radicular Pain

Timepoint

Before the intervention, 8 weeks after intervention

Method of measurement

VAS

Secondary outcomes

1

Description

Disability

Timepoint

Before the intervention, 8 weeks after

Method of measurement

Iranian version of Roland and Morris Disability Questionnaire

2

Description

quality of life

Timepoint

Before the intervention, 8 weeks after

Method of measurement

Iranian version of WHOQOL: BREF questionnaire

3

Description

fear avoidance beliefs

Timepoint

Before the intervention, 8 weeks after

Method of measurement

Iranian version of fear avoidance beliefs questionnaire

4

Description

lateral Abdominal muscles thicknesses(transverse abdominis, internal oblique, and external oblique thickness)

Timepoint

Before the intervention, 4 week after & 8 week after

Method of measurement

ultrasound

5

Description

Paravertebral muscles thicknesses

Timepoint

Before the intervention, 4 week after & 8 week after

Method of measurement

ultrasound

Intervention groups

1

Description

Eight weeks of core stability exercises (modified based on patient's symptoms): 1) Lie on back, Tighten abdominal muscles , press back down into floor - 1 sets of 10 Repetition, twice a day, hold all repetition for 15 Seconds 2) Begin on knees and hands, Tighten abdominal muscles- 1 sets of 10 Repetition, twice a day, hold all repetition for 15 Seconds 3) Walk with tightening abdominal muscles-30 minutes per day 4) Do your daily works with tightening abdominal muscles 5) Lie on back, Lift your buttocks off floor. - 1 sets of 10 Repetition, twice a day, hold all repetition for 15 Seconds 6) Begin on knees and hands, Extend your leg while lifting the opposite arm- 1 sets of 10 Repetition, twice a day, hold all repetition for 15 Seconds 7) Lie on your side, Raise your thighs and hips off floor. - 1 sets of 10 Repetition, twice a day, hold all repetition for 15 Seconds 8) Lie on back, Move your elbow to opposite knee. - 1 sets of 10 Repetition, twice a day, hold all repetition for 15 Seconds 9) Lie on back, Raise your leg and ipsilateral arm off floor- 1 sets of 10 Repetition, twice a day, hold all repetition for 15 Seconds 10) Lie face down, raising your arms and legs off floor. - 1 sets of 10 Repetition, twice a day, hold all repetition for 15 Seconds 11) Lie on back, bent your legs, Rotate your legs from side to side. - 1 sets of 10 Repetition, twice a day, hold all repetition for 15 Seconds 12) Begin standing, Raise one knee up. - 1 sets of 10 Repetition, twice a day, hold all repetition for 15 Seconds 13) Begin standing, do lunge. - 1 sets of 10 Repetition, twice a day, hold all repetition for 15 Seconds 14) Begin standing, do lunge, Raise one knee up. - 1 sets of 10 Repetition, twice a day, hold all repetition for 15 Seconds In addition, there are similar exercises on the sport ball - 1 sets of 10 Repetition, twice a day, hold all repetition for 15 Seconds

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

Sport Medicine Research Center, Tehran University of Medical Sciences and Health Services

Full name of responsible person

Dr. Ramin Kordi

Street address

No. 7- Opposite Shariati Hospital Clinic- After the overpass Nasr- Crossing Jalal Al Ahmad- Tehran

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Tehran

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Tehran University of Medical Sciences

Full name of responsible person

Masud Yunesian

Street address

Faculty of Medicine- Tehran University of Medical Sciences- Keshavarz Blvd - Tehran

City

Tehran

Grant name

93-03-53-27292

Grant code / Reference number

93-03-53-27292

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

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

Sport Medicine Research Center, Tehran University of Medical Sciences and Health Services

Full name of responsible person

Dr. Ramin Kordi

Position

Associate Professor of Tehran University of Medical Sciences

Other areas of specialty/work

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Assistant Professor of Tehran University of Medical Sciences

Other areas of specialty/work

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Position

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Other areas of specialty/work

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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