Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 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)

Phone

+98 21 8863 0227

Email address

normohamadpour@razi.tums.ac.ir

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 lumber surgery; History of lumber 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
City
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
Street address
No. 7- Opposite Shariati Hospital Clinic- After the overpass Nasr- Crossing Jalal Al Ahmad- Tehran
City
Tehran
Postal code
Phone
+98 21 8863 0227
Fax
Email

ramin_kordi@tums.ac.ir

Web page address

Person responsible for scientific inquiries

Contact

Name of organization / entity

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

Full name of responsible person

Dr. Pardis Noormohammadpour

Position

Assistant Professor of Tehran University of Medical Sciences

Other areas of specialty/work

Street address

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

City

Tehran

Postal code

Phone

+98 21 8863 0227

Fax

Email

normohamadpour@tums.ac.ir

Web page address

Person responsible for updating data

Contact

Name of organization / entity

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

Full name of responsible person

Dr. Pardis Noormohammadpour

Position

Assistant Professor of Tehran University of Medical Sciences

Other areas of specialty/work

Street address

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

City

Tehran

Postal code

Phone

+98 21 8863 0227

Fax

Email

normohamadpour@tums.ac.ir

Web page address

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