Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Evaluation of effect of Williams exercises versus Mc kenzie exercises on clinical outcome of patients undergoing lumbar disk herniation surgery

Protocol summary

Study aim
The aim of present study is to investigate the effect of Williams and Mc kenzie exercises on low back pain and abdominal and back muscle endurance in patients with lumbar disc herniation surgery.

Design
Three arm parallel groups randomized trial with not blinded outcome assessment

Settings and conduct
Patients with lumbar disk herniation surgery who operated on Imam Reza Hospital in Kermanshah were included in this study. Patients divided into three groups: group 1(patients with 8 wks of Williams exercises), group 2 patients with 8 weeks of Mc Kenzie exercises) and group 3 (control group). Patient pain, abdominal muscle endurance and lumbar muscle endurance will measure before intervention and eight weeks after intervention.

Participants/Inclusion and exclusion criteria
Inclusion criteria: Patients between 20 and 50 years old undergoing lumbar disk herniation surgery Exclusion criteria: Age more than 50 years and lower than 20 years Concomitant lumbar canal stenosis and spondylolisthesis.

Intervention groups
The experimental group underwent 8-weeks Williams or Mc Kenzie exercises; whereas the control group received conventional treatment at the same time.

Main outcome variables
Lumbar pain, abdominal muscle endurance, lumbar muscle endurance

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20190703044089N1**
Registration date: **2019-07-25, 1398/05/03**
Registration timing: **registered_while_recruiting**

Last update: **2019-07-25, 1398/05/03**
Update count: **0**

Registration date
2019-07-25, 1398/05/03

Registrant information

Name
Ehsan Alimohammadi

Name of organization / entity

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Iran (Islamic Republic of)

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+98 83 3523 1333

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Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2019-07-23, 1398/05/01

Expected recruitment end date
2019-10-23, 1398/08/01

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title
Evaluation of effect of Williams exercises versus Mc kenzie exercises on clinical outcome of patients undergoing lumbar disk herniation surgery

Public title
Effect of Williams Vs Mc Kenzie exercises on clinical outcome of patients undergoing lumbar disk herniation

surgery

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Patients between 20 and 50 years old undergoing lumbar disk herniation surgery

Exclusion criteria:

Age more than 50 years and lower than 20 years
Concomitant lumbar canal stenosis and spondylolisthesis.

Age

From **20 years** old to **50 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **84**

Randomization (investigator's opinion)

Randomized

Randomization description

simple Individual randomization. we will use sealed envelops for randomization.

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 Kermanshah University of Medical Sciences

Street address

Parastar Ave, Imamreza hospital

City

Kermanshah

Province

Kermanshah

Postal code

6761783365

Approval date

2019-07-03, 1398/04/12

Ethics committee reference number

http://ethics.research.ac.ir/IR.KUMS.REC.1398.294

Health conditions studied

1

Description of health condition studied

Lumbar disk herniation

ICD-10 code

M51.16

ICD-10 code description

Intervertebral disc disorders with radiculopathy, lumbar region

Primary outcomes

1

Description

Pain on the basis of Visual Analog Scale

Timepoint

Before intervention and 8 weeks after intervention

Method of measurement

Visual analogue scale to measure pain.

Secondary outcomes

1

Description

Abdominal muscle endurance

Timepoint

Before intervention and 8 weeks after intervention

Method of measurement

Trunk flexion endurance test

2

Description

Back muscle endurance

Timepoint

Before intervention and 8 weeks after intervention

Method of measurement

Modified Biering-Sorenson test

Intervention groups

1

Description

Intervention group: group 1=patients with Williams exercises

Category

Rehabilitation

2

Description

Intervention group: group 2= patients with Mc kenzie exercises

Category

Rehabilitation

3

Description
Control group: group 3= No intervention
Category
Rehabilitation

Recruitment centers

1

Recruitment center
Name of recruitment center
Imam Reza hospital
Full name of responsible person
Ehsan Alimohammadi
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Parastar Ave, Kermanshah, Imam Reza hospital
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Kermanshah University of Medical Sciences
Full name of responsible person
Farid Najafi
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Parastar Ave, Imam Reza hospital
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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
Kermanshah 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
Kermanshah University of Medical Sciences
Full name of responsible person
Ehsan Alimohammadi
Position
Assistant professor of neurosurgery
Latest degree
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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
Yes - There is a plan to make this available

Informed Consent Form
Yes - There is a plan to make this available

Clinical Study Report
Yes - There is a plan to make this available

Analytic Code
Yes - There is a plan to make this available

Data Dictionary
Yes - There is a plan to make this available

Title and more details about the data/document
All collected deidentified IPD

When the data will become available and for how long
May 2020

To whom data/document is available
Deidentified IPD will available for people working in academic institutions

Under which criteria data/document could be used
Deidentified IPD and any additional supporting information/documents will be available via contacting with corresponding author.

From where data/document is obtainable
Deidentified IPD and any additional supporting information/documents will be available via contacting with corresponding author.

What processes are involved for a request to access data/document
Deidentified IPD and any additional supporting information/documents will be available via contacting with corresponding author after one month.

Comments