Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

The Effectiveness of Gluteus Maximus Activation and Kinesio Taping along with Muscle Energy Technique on Pain, Alignment and Functional Activities in Subject with Anterior Innominate Rotation Dysfunction

Protocol summary

Study aim

The Effectiveness of Gluteus Maximus Activation and Kinesio Taping along with Muscle Energy Technique on Pain, Alignment and Functional Activities in Subject with Anterior Innominate Rotation Dysfunction

Design

Forty-five patients with anterior innominate rotation were divided into three groups (gluteus maximus exercises, kinesio tape and control) in a simple random manner using a sealed envelope. The study is single blinded with parallel groups.

Settings and conduct

This single blinded study (data analyst) will be conducted in the physiotherapy clinic of the rehabilitation faculty of Tehran University of Medical Sciences, and the participants will be randomly divided into three groups (two intervention groups and a control group) and will be evaluated before and after the intervention (after six sessions).

Participants/Inclusion and exclusion criteria

Inclusion criteria: Age between 18-50 years old, chronic sacroiliac joint dysfunction as diagnosed by at least three positive tests out of the five specific orthopedic sacroiliac provocation tests. Participants who are taking analgesic medication (e.g., Ibuprofen, Paracetamol) will be included following a three day wash out period. Exclusion criteria: Absolute contraindications to spinal manipulative therapy (i.e., abdominal aortic aneurysm, disc prolapse, fractures, osteoporosis, dislocation, bone tumors and bone infections and/or kinesio taping (malignancy, cellulitis, skin infections and open wounds, and deep vein thrombosis). Low back pain due to a history of trauma and radiculopathy.

Intervention groups

Both intervention groups will receive muscle energy techniques. One of the intervention groups receives gluteus maximus exercises and the other receives kinesio tape. The control group will only receive muscle energy techniques.

Main outcome variables

Pain, Alignment, Functional impairment, Balance

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20210214050356N6**
Registration date: **2022-08-15, 1401/05/24**
Registration timing: **prospective**

Last update: **2022-08-15, 1401/05/24**
Update count: **0**

Registration date

2022-08-15, 1401/05/24

Registrant information

Name

Sara Fereydounnia

Name of organization / entity

Country

Iran (Islamic Republic of)

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2022-08-23, 1401/06/01

Expected recruitment end date

2022-12-21, 1401/09/30

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The Effectiveness of Gluteus Maximus Activation and Kinesio Taping along with Muscle Energy Technique on Pain, Alignment and Functional Activities in Subject with Anterior Innominate Rotation Dysfunction

Public title

Taping and Muscle Contraction in Pelvic Dysfunction

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Age between 18-50 years old Chronic sacroiliac joint dysfunction as diagnosed by at least three positive tests out of the five specific orthopedic sacroiliac provocation tests. Participants who are taking analgesic medication (e.g., Ibuprofen, Paracetamol) will be included following a three day wash out period.

Exclusion criteria:

Absolute contraindications to spinal manipulative therapy (i.e., abdominal aortic aneurysm, disc prolapse, fractures, osteoporosis, dislocation, bone tumors and bone infections and/or kinesio taping (malignancy, cellulitis, skin infections and open wounds, and deep vein thrombosis). Low back pain due to a history of trauma and radiculopathy.

Age

From **18 years** old to **50 years** old

Gender

Both

Phase

N/A

Groups that have been masked

- Outcome assessor

Sample size

Target sample size: **45**

Randomization (investigator's opinion)

Randomized

Randomization description

After the initial evaluation, the patients are randomly placed in one of the three intervention 1, intervention 2 and control groups (randomization method: block of six, unit: cluster). The randomization process will be done by an independent person and each of the numbers assigned to the participants through the software (randomization tool: Random Allocation software with a block of six and equal allocation ratio for three groups), they are placed inside a sealed envelope and the patients receive this envelope from the clinic secretary who is not aware of the evaluation processes and etc.

Blinding (investigator's opinion)

Single blinded

Blinding description

As mentioned above, the study will be single-blinded. In this way, the participants know in which group they are, also the therapist, who is the person who performs the intervention and evaluates the outcome measures, knows in which group the participants are. But the person responsible for analyzing the data is unaware of which of the study groups the data belongs to.

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Research Ethics Committees of School of Nursing and Midwifery & Rehabilitation- Tehran University of

Street address

Vice Chancellor for Research, 6th Floor, Central University Organization, Corner of Ghods St, Keshavarz Blvd.

City

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Province

Tehran

Postal code

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Approval date

2022-07-31, 1401/05/09

Ethics committee reference number

IR.TUMS.FNM.REC.1401.060

Health conditions studied

1

Description of health condition studied

Dislocation of other and unspecified parts of lumbar spine and pelvis (anterior innominate rotation)

ICD-10 code

S33.3

ICD-10 code description

Dislocation of other and unspecified parts of lumbar spine and pelvis

Primary outcomes

1

Description

Pain at rest

Timepoint

Before intervention- After the last session of intervention

Method of measurement

Visual Analogue Scale

2

Description
Pain during motion
Timepoint
Before intervention- After the last session of intervention
Method of measurement
Visual Analogue Scale

3

Description
Alignment
Timepoint
Before intervention- After the last session of intervention
Method of measurement
Photogrammetric pelvic tilt angles analysis

4

Description
Functional impairment
Timepoint
Before intervention- After the last session of intervention
Method of measurement
Oswestry disability index

5

Description
Balance
Timepoint
Before intervention- After the last session of intervention
Method of measurement
Y-Balance test

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group 1: Group 1 (n = 15) will receive Gluteus Maximus strengthening exercises with muscle energy techniques for inducing posterior rotation of ilium, three sessions in a week for two weeks.
Category
Rehabilitation

2

Description
Intervention group 2: Group 2 (n = 15) will receive Kinesio Taping for facilitation of rectus abominis and external oblique muscles and mechanical correction for maintaining the position of ilium with muscle energy techniques for inducing posterior rotation of ilium, three sessions in a week for two weeks.
Category
Rehabilitation

3

Description
Control group: Group 3 (n = 15) will receive muscle energy techniques for inducing posterior rotation of ilium, three sessions in a week for two weeks.
Category
Rehabilitation

Recruitment centers

1

Recruitment center
Name of recruitment center
Tehran University of Medical Sciences
Full name of responsible person
Sara Fereydounnia
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corner of Ghods Street, Boulevard
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
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Full name of responsible person
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research@tums.ac.ir
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
Sara Fereydounnia

Position
Assistant Professor

Latest degree
Ph.D.

Other areas of specialty/work
Physiotherapy

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Person responsible for scientific inquiries

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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
Undecided - It is not yet known if there will be a plan to make this available

Title and more details about the data/document
All data is potentially shareable after unidentified individuals.

When the data will become available and for how long
Access period starts 3 months after the articles are published

To whom data/document is available
For researchers working in academic, scientific and hospital institutions

Under which criteria data/document could be used

Researchers working in the field of musculoskeletal physiotherapy and manual therapy.

From where data/document is obtainable

Applicants for documentation can contact Dr. Sara Fereydounnia via email. S-fereydounnia@sina.tums.ac.ir

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

Once they have the necessary criteria, the information will be provided to them within a month.

Comments