

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

Comparison of Post Isometric Relaxation and Hold Relax Agonist Contract in improving Pain and Disability in Mechanical Neck Pain

Protocol summary

Study aim

To compare the effect of post isometric relaxation and hold relax agonist contract in improving pain and disability in mechanical neck pain

Design

Randomized clinical trial on 48 individuals (divided equally in two groups), randomization by lottery method, parallel groups, single-blind.

Settings and conduct

Ghurki trust and teaching hospital , Zahida welfare hospital . Assessor is blinded.

Participants/Inclusion and exclusion criteria

Inclusion criteria: male and female; age range 18 to 45; duration of pain for 3 months; neck pain without radiating to arm; patients with mechanical neck pain diagnosed by orthopedist; pain increased by sustain posture; limitation of rotation and side flexion of neck. Exclusion criteria: history of neck surgery; stenosis; scoliosis; nerve involvement; neck pain radiation to arm; malignancy, infection, inflammatory disorder; shoulder pain

Intervention groups

Group- A (Muscle energy technique + supervised & home exercise program (HEP) Group B (Hold relax agonist contract +supervised + home exercise (HEP)

Main outcome variables

pain and disability

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20200514047441N1**

Registration date: **2020-06-15, 1399/03/26**

Registration timing: **registered_while_recruiting**

Last update: **2020-06-15, 1399/03/26**

Update count: **0**

Registration date

2020-06-15, 1399/03/26

Registrant information

Name

Aroosa Iqbal

Name of organization / entity

Riphah International University,Lahore, Pakistan

Country

Pakistan

Phone

+92 42 35753538

Email address

aroosaiqbal450@gmail.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2019-09-26, 1398/07/04

Expected recruitment end date

2020-08-01, 1399/05/11

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison of Post Isometric Relaxation and Hold Relax Agonist Contract in improving Pain and Disability in Mechanical Neck Pain

Public title

comparison of two MET techniques in mechanical neck pain

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Male and Female age range 18 to 45 Duration of pain 3 months Neck pain without radiating to arm Pain increased by sustain posture Patients having mechanical neck pain diagnosed from orthopedic Limitation of rotation and side flexion of neck

Exclusion criteria:

History of neck surgery stenosis Scoliosis Nerve involvement Neck pain radiating to arm Malignancy, infection inflammatory disorder Shoulder pain

Age

From **18 years** old to **45 years** old

Gender

Both

Phase

4

Groups that have been masked

- Outcome assessor

Sample size

Target sample size: **48**

Randomization (investigator's opinion)

Randomized

Randomization description

Lottery method is used to divide subjects in two groups. A researcher will randomly picks numbers either 1 and 2. 1 will represent the group A (post isometric relaxation) and 2 will represent group B (hold relax agonist contract). Subjects will be randomly allocated in two treatment groups

Blinding (investigator's opinion)

Single blinded

Blinding description

Outcomes assessor is blinded, they do not know about the allocation. A physiotherapist who works as outcome assessor takes pre and post treatment measurements

Placebo

Not used

Assignment

Parallel

Other design features

Randomized clinical trial

Secondary Ids

empty

Ethics committees**1****Ethics committee****Name of ethics committee**

Ethics committee of Riphah International university

Street address

near Hajj complex I- 14, Islamabad, Islamabad capital territory

City

Islamabad

Postal code

46000

Approval date

2019-01-09, 1397/10/19

Ethics committee reference number

REC/RCRS/20/1027

Health conditions studied**1****Description of health condition studied**

Neck pain is one of the most common musculoskeletal disorders mostly found in office worker, postural syndrome, anxiety, depression . Excessive forward head and neck flexion for a defined period of time would cause neck pain in healthy people

ICD-10 code

M54.2

ICD-10 code description

Cervicalgia

Primary outcomes**1****Description**

neck pain

Timepoint

before intervention and after 4 weeks

Method of measurement

Visual analogue scale to measure pain

2**Description**

Improvement of neck disability

Timepoint

before intervention and after 4 weeks

Method of measurement

Neck disability index scale

Secondary outcomes

empty

Intervention groups**1****Description**

Intervention group 1: Muscle energy technique in form of post isometric relaxation will apply on upper trapezius, levator scapulae, scalene and sternocleidomastiod muscles along with hotpack and Tens. 3 treatment sessions will be given in a week. Initial measurement will be recorded before treatment and outcomes will be measured after 4 weeks through Neck disability index scale and Visual analogue scale.

Category

Treatment - Other

2

Description

Intervention group 2: Hold relax agonist contract will be performed on upper trapezius, levator scapulae, scalene and sternocleidomastoid muscles along with hot pack and Tens. 3 treatment sessions will be given in a week. Initial measurement will be recorded before treatment and outcomes will be measured after 4 weeks through Neck disability index scale and Visual analogue scale.

Category

Treatment - Other

Recruitment centers

1

Recruitment center

Name of recruitment center

Ghurki Trust Teaching Hospital

Full name of responsible person

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Recruitment center

Name of recruitment center

Zahida welfare hospital

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Sponsors / Funding sources

1

Sponsor

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self

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Grant name**Grant code / Reference number****Is the source of funding the same sponsor organization/entity?**

No

Title of funding source

self

Proportion provided by this source

100

Public or private sector

Private

Domestic or foreign origin

Domestic

Category of foreign source of funding

empty

Country of origin**Type of organization providing the funding**

Other

Person responsible for general inquiries

Contact

Name of organization / entity

Riphah International university

Full name of responsible person

Aroosa Iqbal

Position

student

Latest degree

Bachelor

Other areas of specialty/work

Physiotherapy

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Person responsible for scientific inquiries

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Person responsible for updating data

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Sharing plan

Deidentified Individual Participant Data Set (IPD)

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

Study Protocol

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

Statistical Analysis Plan

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

Informed Consent Form

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

Clinical Study Report

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

Analytic Code

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

Data Dictionary

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