Clinical Trial Protocol
Iranian Registry of Clinical Trials

09 Nov 2026

Comparative effects of Integrated Neuromuscular Inhibition Technique and Active Release Technique on Pain, Range of Motion, and Neck Disability in Patients with Upper Trapezius Myofascial Trigger Points; A Randomized Clinical Trial

Protocol summary

Study aim
To analyze the comparative effects of integrated neuromuscular inhibition technique and active release technique in patients with upper trapezius myofascial trigger points.

Design
Two arm parallel group Randomized trial with participant blinded. Randomization was centralised and computerised with concealed randomization sequence carried out through a randomization software.

Settings and conduct
The trial is conducted in Riphah International university Faisalabad Campus. Subjects are chosen according to inclusion criteria. Subjects are blinded as the don't know their treatment protocol and group.

Participants/Inclusion and exclusion criteria
Inclusion criteria: Participants aged between 20 to 35 years; Work/sedentary activity of 5 hours per day; Minimum of 4 months of neck pain due to trigger points; Decreased cervical lateral flexion and rotation Exclusion criteria: History of whiplash injury, fracture or other congenital disorders; Cervical radiculopathy, radiculitis or myelopathy or vascular syndromes; Degenerative conditions of cervical spine e.g., spondylosis; Any deformity of cervical and thoracic spine or scapular deformity; Participant received any treatment of neck in past 3 months; VAS score >7

Intervention groups
Group A: Integrated neuromuscular inhibition technique. Intermittent Ischemic compression for 15 seconds, Strain-Counterstrain for 20-30 seconds, Muscle Energy Technique in which isometric contraction held for 7-10 seconds and stretch held for 30 seconds (3-5 repetitions) Group B: Active Release Technique - 3 sets with 10 repetitions

Main outcome variables
Neck pain; Cervical lateral flexion and rotation; Neck disability

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20230524058279N1**
Registration date: **2023-06-08, 1402/03/18**
Registration timing: **registered_while_recruiting**

Last update: **2023-06-08, 1402/03/18**
Update count: **0**

Registration date
2023-06-08, 1402/03/18

Registrant information

Name
Rida E Fatima

Name of organization / entity
Riphah International University, Faisalabad Campus.

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Pakistan

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Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2023-05-29, 1402/03/08

Expected recruitment end date
2023-09-29, 1402/07/07

Actual recruitment start date
empty
Actual recruitment end date
empty
Trial completion date
empty

Scientific title
Comparative effects of Integrated Neuromuscular Inhibition Technique and Active Release Technique on Pain, Range of Motion, and Neck Disability in Patients with Upper Trapezius Myofascial Trigger Points; A Randomized Clinical Trial

Public title
Comparative effects of Integrated Neuromuscular Inhibition Technique and Active Release Technique on Pain, Range of Motion, and Neck Disability in Patients with Upper Trapezius Myofascial Trigger Points; A Randomized Clinical Trial
Purpose
Treatment
Inclusion/Exclusion criteria
Inclusion criteria:
Participants aged between 20 to 35 years.
Work/Sedentary activity of 5 hours per day. Minimum of 4 months of neck pain due to trigger points. Decreased cervical lateral flexion and rotation.
Exclusion criteria:
History of whiplash injury, fracture or other congenital disorders. Cervical radiculopathy, radiculitis or myelopathy or vascular syndromes. Degenerative conditions of cervical spine e.g. spondylosis Any deformity of cervical and thoracic spine or scapular deformity. Participant received any treatment of neck in past 3 months. VAS score >7
Age
From **20 years** old to **35 years** old
Gender
Both

Phase
N/A
Groups that have been masked

- Participant

Sample size
Target sample size: **44**
Randomization (investigator's opinion)
Randomized
Randomization description
A computer-generated method was employed to randomly assign subjects to groups, namely Group A and Group B, for the purpose of conducting the intervention. Random allocation software was used for the purpose. The number of participants and Interventions assign to groups were added in the software, after which participants were assigned to their respective groups randomly.
Blinding (investigator's opinion)
Single blinded
Blinding description
There were two interventional groups in this study. Groups were allocated to the subjects by the computer generated randomization method but subjects were not told which group they belonged to. The measurements taken from participants on questionnaire were also not shown to participants.
Placebo
Not used
Assignment
Parallel
Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Research and Ethical Committee
Street address
Main Satyana Road, Adjacent Fish Farm Faisalabad.
City
Faisalabad
Postal code
38000
Approval date
2023-05-16, 1402/02/26
Ethics committee reference number
REC-FSD-00319

Health conditions studied

1

Description of health condition studied
Latent myofascial trigger points causing neck pain for 3 months or more
ICD-10 code
M70.8
ICD-10 code description
soft tissue disorders, use, overuse, pressure

Primary outcomes

1

Description
Cervical Pain
Timepoint
Baseline reading before intervention, post reading was taken after 2 weeks and Follow up reading was measured 4 weeks after intervention
Method of measurement
Cervical pain of each individual was measured by using Visual analogue scale (VAS)

2

Description

Cervical range of motion - Side bending and Lateral rotation

Timepoint

Baseline reading before intervention, post reading was taken after 2 weeks and Follow up reading was measured 4 weeks after intervention

Method of measurement

Cervical range of motion of side bending and rotation was measured using a Goniometer

Secondary outcomes

1

Description

Neck disability

Timepoint

Baseline reading before intervention, post reading was taken after 2 weeks and Follow up reading was measured 4 weeks after intervention

Method of measurement

Neck disability of each individual was calculated using Neck Disability Index (NDI)

Intervention groups

1

Description

Intervention Group A; this group will receive 'Integrated Neuromuscular Inhibition Technique' which will target upper trapezius trigger points to improve neck pain, range of motion and neck disability. The intervention will be applied 2 days for 2 weeks. This whole technique will take upto 20 minutes per session. Hotpack will be used as a baseline treatment before intervention and cervical stretching exercises (three repetitions) will be performed after applying intervention.

Category

Treatment - Other

2

Description

Intervention Group B; This group will receive ten repetitions of 'Active Release Technique' which will target upper trapezius latent trigger points to improve neck pain, range of motion and neck disability. The intervention will be applied 2 days for 2 weeks. This whole technique will take upto 20 minutes per session. Hotpack will be used as a baseline treatment before intervention and cervical stretching exercises (three repetitions) will be performed after applying intervention.

Category

Treatment - Other

Recruitment centers

1

Recruitment center

Name of recruitment center

Riphah International University Faisalabad Campus

Full name of responsible person

Dr. Sehreen Anwar

Street address

Riphah International University, Adjacent Fish Farm, Satyana Road, Faisalabad.

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

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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

Riphah International University Faisalabad Campus

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

Academic

Person responsible for general inquiries

Contact

Name of organization / entity

Riphah International University Faisalabad Campus

Full name of responsible person

Rida E Fatima

Position

Lecturer

Latest degree
Master

Other areas of specialty/work
Physiotherapy

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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
Not applicable

Analytic Code
Not applicable

Data Dictionary
Not applicable