Clinical Trial Protocol
Iranian Registry of Clinical Trials

10 Jun 2026

Effect of Neuromuscular Reeducation on Myofascial Trigger Point in Cervical Pain patients

Protocol summary

Study aim

To evaluate the effect of Neuromuscular Reeducation technique along with sustain ischemic compression on upper trapezius myofascial trigger points regarding pain , muscle length.

Design

Two arm parallel group randomised trial with blinded postoperative care and outcome assessment

Settings and conduct

Data was collected from physiotherapy OPD of Railway Rehabilitation center, Railway General Hospital Pakistan. Subject recruitment occurred between Feb 2017 to July 2017 (6 Months) 49 patients having trigger point in upper trapezius muscle were included in the study and placed into 2 groups (24 in control group “A” , 25 in experimental group “B”) Non –probability convenient sampling technique was used to collect sample. Patients were randomly assigned using toss coin method.

Participants/Inclusion and exclusion criteria

INCLUSION CRITERIA : • Age 18-55 years, both genders, • Pain more than 5 on NPRS • Reduced cervical lateral flexion to the opposite side and Painful upper trapezius trigger point • Hypersensitive taut band in Upper fiber of trapezius • Jump sign identification through patient vocalization or withdrawal symptom EXCLUSION CRITERIA: • Recent traumatic history of cervical spine or shoulder region • Diagnosed Fibromyalgia syndrome • Whiplash injury • Malignancy • Skin infections or open wound in the site of upper trapezius

Intervention groups

1. Moist HOT PACK: (5-8mins) at the start of treatment 2. Ultrasound: Frequency:1- 3 MHz, Intensity: 1-1.4 W/cm2, Time: 8-10 minutes, Mode 3. Ischemic compression: Appropriate amount of sustained pressures was applied for 90 sec and 3-5 times within one session. 4. NMR technique 3-5 times in each session. 5. Stretching & Home Plan: 3 sets of 10 repetition with 10 seconds hold (targeted muscles)

Main outcome variables

Outcomes were measured by ROM(Goniometer),NPRS scores at baseline and last treatment session

General information

Reason for update

Acronym

NMR

IRCT registration information

IRCT registration number: **IRCT20190924044861N1**
Registration date: **2019-09-27, 1398/07/05**
Registration timing: **retrospective**

Last update: **2019-09-27, 1398/07/05**
Update count: **0**

Registration date

2019-09-27, 1398/07/05

Registrant information

Name

KINZA ANWAR

Name of organization / entity

THE UNIVERSITY OF LAHORE,ISLAMABAD CAMPUS,PAKISTAN

Country

Pakistan

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2017-01-05, 1395/10/16

Expected recruitment end date

2017-06-15, 1396/03/25

Actual recruitment start date

2017-02-07, 1395/11/19

Actual recruitment end date

2017-07-20, 1396/04/29

Trial completion date

2017-07-20, 1396/04/29

Scientific title

Effect of Neuromuscular Reeducation on Myofascial Trigger Point in Cervical Pain patients

Public title

Neuromuscular Reeducation on Myofascial Trigger Point

Purpose

Health service research

Inclusion/Exclusion criteria

Inclusion criteria:

Pain more than 5 on NPRS Reduced cervical lateral flexion to the opposite side and Painful upper trapezius trigger point Hypersensitive taut band in Upper fiber of trapezius Jump sign identification through patient vocalization or withdrawal symptom

Exclusion criteria:

Recent traumatic history of cervical spine or shoulder region Diagnosed Fibromyalgia syndrome Whiplash injury Malignancy Skin infections or open wound in the site of upper trapezius

Age

From **18 years** old to **55 years** old

Gender

Both

Phase

N/A

Groups that have been masked

- Participant
- Investigator

Sample size

Target sample size: **70**

Actual sample size reached: **49**

Randomization (investigator's opinion)

Randomized

Randomization description

The subjects were randomly divided into 2 groups (control group A and experimental group B) by coin toss method using convenient sampling technique and informed consent was taken from each patient participated in the study.Among them 25 patients were randomly allocated to each group.

Blinding (investigator's opinion)

Double blinded

Blinding description

In the present study both physical therapist and patients(participants) were blind.Patients were randomly allocated to both groups.

Placebo

Not used

Assignment

Other

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Research Ethical Committee,Riphah College of Rehabilitation Sciences,Islamabad,Pakistan.

Street address

Riphah International University Islamabd City Campus 7th Avenue, Sector G-7/4, Islamabad

City

ISLAMABAD

Postal code

47311

Approval date

2016-12-29, 1395/10/09

Ethics committee reference number

00177

Health conditions studied

1

Description of health condition studied

cervical pain due to myofascial trigger points(MTRPs)

ICD-10 code

M70.8

ICD-10 code description

Other soft tissue disorders related to use, overuse and pressure

Primary outcomes

1

Description

Goniometer for upper trapezius Range of motion(muscle length)

Timepoint

before intervention and after 2 weeks of intervention

Method of measurement

Goniometer for upper trapezius Range of motion(muscle length)placed goniometer in upper fibers of trapezius and ask to perform the movement, measure the ROM and then compare it with intact side.

Secondary outcomes

1

Description

Numeric Pain rating Scale(NPRS) for pain assessment scores

Timepoint

NPRS scores before treatment than after 2 weeks of treatment

Method of measurement

NPRS score beyond 5 were assessed before intervention and compare it after 2 weeks

Intervention groups

1

Description
Control group:Moist HOT PACK: (5-8mins) at the start of treatment 2. Ultrasound: Frequency:1- 3 MHz, Intensity:1- 1.4 W/cm2, Time: 8-10 minutes,3. Ischemic compression: Appropriate amount of sustained pressures was applied for 90 sec and 3-5 times within one session.4. Stretching & Home Plan : 3 sets of 10 repetition with 10 seconds hold

Category
Treatment - Other

2

Description
Intervention group:1. Moist HOT PACK: (5-8mins) at the start of treatment 2. Ultrasound: Frequency:1- 3 MHz, Intensity: 1-1.4 W/cm2, Time: 8-10 minutes, 3. Ischemic compression: Appropriate amount of sustained pressures was applied for 90 sec and 3-5 times within one session.4. NMR technique 3-5 times in each session.5. Stretching & Home Plan: 3 sets of 10 repetition with 10 seconds hold (targeted muscles)

Category
Other

Recruitment centers

1

Recruitment center

Name of recruitment center
Railway Rehabilitation center, Pakistan Railway Hospital,Westrdige,Rawalpind,Pakistan

Full name of responsible person
Dr Abdul Ghafoor Sajjad

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Railway Carriage Factory Rd, Railway Scheme 7, Rawalpindi, Punjab

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity
RIPHAH COLLEGE OF REHABILITATION SCIENCES,ISLAMABAD,PAKISTAN

Full name of responsible person
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Grant name
Academic

Grant code / Reference number
0

Is the source of funding the same sponsor organization/entity?
Yes

Title of funding source
RIPHAH COLLEGE OF REHABILITATION SCIENCES,ISLAMABAD,PAKISTAN

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
The University of Lahore,Islamabad Campus,Pakistan

Full name of responsible person
Kinza Anwar

Position
Lecturer

Latest degree
Master

Other areas of specialty/work
Physiotherapy

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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
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
Title and more details about the data/document
IPD collected for the primary outcome measure only
When the data will become available and for how long
starting 6 months after publication
To whom data/document is available
in academic institutions
Under which criteria data/document could be used
who want to compare/conduct research on Neuromuscular Reeducation and myofascial trigger points data will be provided.
From where data/document is obtainable
KINZA ANWAR LECTURER AT UNIVERSITY OF LAHORE,ISLAMABAD CAMPUS,PAKISTAN kinza.anwar29@gmail.com +923239735427
What processes are involved for a request to access data/document
through email
Comments