

# 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/cm<sup>2</sup>, 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

##### Phone

+92 51 5537867

##### Email address

kinza.anwar29@gmail.com

##### 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 Islamabad 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/cm<sup>2</sup>, 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/cm<sup>2</sup>, 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

##### Street address

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

##### City

Rawalpindi

##### Postal code

46060

##### Phone

+92 51 5481826

##### Email

ghafoor.sajjad@riphah.edu.pk

##### Web page address

<https://www.iimctprh.com/rehabilitation-center/>

## Sponsors / Funding sources

### 1

#### Sponsor

Name of organization / entity

RIPHAH COLLEGE OF REHABILITATION SCIENCES,ISLAMABAD,PAKISTAN

#### Full name of responsible person

Abdul Gahfoor Sajjad

#### Street address

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

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#### Postal code

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#### Phone

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#### Email

ghafoor.sajjad@riphah.edu.pk

#### Web page address

<https://www.riphah.edu.pk/faculty/ict-rehabilitation-sciences/contact>

#### 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

##### Street address

6.7 KM Japan Road, Sihala Zone V, Islamabad, Pakistan

##### City

Rawalpindi

##### Province

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##### Postal code

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## Person responsible for scientific inquiries

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## Person responsible for updating data

### Contact

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The University of Lahore, Islamabad Campus, Pakistan  
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**Position**  
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**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

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