

Clinical Trial Protocol

Iranian Registry of Clinical Trials

09 Jun 2026

Effect of Graston technique versus Ischemic compression in students who developed neck pain during distance learning in COVID-19: A randomized clinical trial

Protocol summary

Study aim

The objective of study is to compare the effects of Graston technique versus ischemic compression on pain, ROM of cervical spine along with functional performance among students with neck pain.

Design

A randomized clinical not blind trial. Sample size 54 divided in 2 groups. Total 12 treatment sessions will be given to subjects in 4 weeks with 3 sessions/week.

Settings and conduct

Setting: Sargodha Institute of Health Sciences 117-C, Zafar Ullah Road, Satellite Town Sargodha and Fatima hospital, University road, Sargodha.

Participants/Inclusion and exclusion criteria

Inclusion criteria: Male and female subjects aged 18-25 years with neck pain from previous 2-3 months. Mobile phone usage >4 hours daily. Neck pain with reduced cervical range of motion (ROM). NPRS value >4 and NDI score greater than 10. Exclusion criteria: Subjects with cervical rib, migraine problem, vertebrobasilar artery insufficiency (VBI). Subjects with diagnosed cases of discogenic disease, spinal infection and inflammatory disorders, scoliosis and neck surgery or trauma.

Intervention groups

Patients will be randomly divided into two groups with 27 subjects in each group. After taking baseline assessment Group A will be treated with hot pack for 7-10 min. Graston technique will be performed on neck for 5 min. On the other hand Group B will be treated with hot pack for 7-10 min. Ischemic compression approach will be performed on neck for 5 min. one set of 5 repetitions will be given. 3 sessions per week on alternate days for 4 weeks treatment will be carried out. Treatment time of each session will be approximately 15 minutes.

Main outcome variables

Pain(NPRS), Functional performance(NDI), Cervical AROM's(Universal Goniometer)

General information

Reason for update

Acronym

COVID 19

IRCT registration information

IRCT registration number: **IRCT20210716051905N1**

Registration date: **2021-08-01, 1400/05/10**

Registration timing: **registered_while_recruiting**

Last update: **2021-08-01, 1400/05/10**

Update count: **0**

Registration date

2021-08-01, 1400/05/10

Registrant information

Name

Mushyyaida Iqbal

Name of organization / entity

Sargodha institute of health sciences

Country

Pakistan

Phone

+92 48 6532916

Email address

mushyyaida.iqbal127@gmail.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2021-08-01, 1400/05/10

Expected recruitment end date

2021-09-01, 1400/06/10

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effect of Graston technique versus Ischemic compression in students who developed neck pain during distance learning in COVID-19: A randomized clinical trial

Public title

Effect of Graston technique versus Ischemic compression in students who developed neck pain during distance learning in COVID-19: A randomized clinical trial

Purpose

Treatment

Inclusion/Exclusion criteria**Inclusion criteria:**

Male and female subjects aged 18-25 years. Neck pain from previous 2-3 months. Mobile phone usage >4 hours daily. Neck pain with reduced cervical range of motion (ROM). NPRS value >4. NDI score greater than 10.

Exclusion criteria:

Subjects with cervical rib. Subjects with migraine problem. Subjects with vertebral artery insufficiency (VBI). Subjects with diagnosed cases of discogenic disease. Spinal infection and inflammatory disorder. Scoliosis Neck surgery or trauma

Age

From **18 years** old to **25 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **54**

Randomization (investigator's opinion)

Randomized

Randomization description

Randomization by lottery method. Allocation concealment through sealed envelopes.

Blinding (investigator's opinion)

Not blinded

Blinding description**Placebo**

Not used

Assignment

Parallel

Other design features

Non-probability convenient sampling technique will be used to recruit the individuals for the study and then randomization will be done by lottery method to divide the individuals in two interventional groups. Sealed envelopes will be used for allocation concealment.

Secondary IDs

empty

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

Ethical Review Committee of Sargodha Institute of Health Sciences, Affiliated with GCU Faisalabad

Street address

117-C, Zafar Ullah Road, Satellite Town Sargodha

City

Sargodha

Postal code

40100

Approval date

2021-07-17, 1400/04/26

Ethics committee reference number

SIHS/21/159

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

Neck pain that is perceived anywhere in the posterior region of the cervical spine, from the superior nuchal line to the first thoracic spinous process.

ICD-10 code

M54.2

ICD-10 code description

Cervicalgia

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

Pain

Timepoint

Before treatment and after treatment(4th week)

Method of measurement

Numeric pain rating scale(NPRS)

2**Description**

Functional performance

Timepoint

Before treatment and after treatment(4th week)

Method of measurement

Neck disability index(NDI)

3**Description**

Cervical AROM

Timepoint

Before treatment and after treatment(4th week)

Method of measurement

Universal goniometer

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group: After taking base line measures Group A will be treated with hot pack for 7-10 min. Graston technique will be performed on neck for 5 min.3 sessions per week on alternate days for 4 weeks treatment will be given.

Category

Treatment - Other

2

Description

Intervention group: After taking base line measures Group B will be treated with hot pack for 7-10 min. Ischemic compression approach will be performed on neck for 5 min. One set of 5 repetitions will be given.3 sessions per week on alternate days for 4 weeks treatment will be carried out.

Category

Treatment - Other

Recruitment centers

1

Recruitment center

Name of recruitment center

Sargodha Institute of Health Sciences 117-C, Zafar Ullah Road, Satellite Town Sargodha

Full name of responsible person

Mushyyaida Iqbal

Street address

Chak no 127 NB Sillanwali Sargodha

City

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Postal code

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Phone

+92 48 3252717

Email

mushyyaida.iqbal127@gmail.com

Web page address

http://sihs.edu.pk

2

Recruitment center

Name of recruitment center

Fatima Hospital, University road Sargodha, Pakistan

Full name of responsible person

Mushyyaida Iqbal

Street address

Chak no 127 NB Sillanwali Sargodha

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Phone

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Email

mushyyaida.iqbal127@gmail.com

Web page address

https://www.marham.pk/hospitals/sargodha/fatima-hospital/university-road

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Sargodha Institute of Health Sciences, 117-C, Zafar Ullah Road, Satellite Town Sargodha

Full name of responsible person

Mushyyaida Iqbal

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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

Sargodha Institute of Health Sciences, Sargodha

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

Sargodha Institute of Health Sciences, 117-C, Zafar Ullah Road, Satellite Town Sargodha

Full name of responsible person

Mushyyaida Iqbal

Position

Vice Principal Sargodha Institute of Health Sciences, Sargodha

Latest degree

Master

Other areas of specialty/work

Physiotherapy

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Person responsible for scientific inquiries

Contact

Name of organization / entity

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Person responsible for updating data

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Name of organization / entity

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Sharing plan

Deidentified Individual Participant Data Set (IPD)

No - There is not a plan to make this available

Justification/reason for indecision/not sharing IPD

There is no further decision and information is decided yet

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