

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 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

Sargodha

##### Postal code

40100

##### 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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##### Postal code

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##### Phone

+92 48 6532916

##### 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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Chak no 127 NB Sillanwali Sargodha

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##### Email

mushyyaida.iqbal127@gmail.com

##### 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

##### Street address

Chak no 127 NB Sillanwali Sargodha

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**Province**

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**Person responsible for scientific inquiries**

**Contact**

**Name of organization / entity**

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

**Full name of responsible person**

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**Person responsible for updating data**

**Contact**

**Name of organization / entity**

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**Full name of responsible person**

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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