Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

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

Public title
Effect of Graston technique versus Ischemic compression in students who developed neck pain during distance learning in COVID-19: A randomize 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 vertebrobasilar 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 envelops 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
City
Sargodha
Postal code
40100
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
Street address
Chak no 127 NB Sillanwali Sargodha
City
Sargodha
Postal code
40100
Phone
+92 48 3252717
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

City
Sargodha

Province
Punjab

Postal code
40100

Phone
+92 48 6532916

Email
mushyyaida.iqbal127@gmail.com

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
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

City
Sargodha

Province
Punjab

Postal code
40100

Phone
+92 48 6532916

Email
mushyyaida.iqbal127@gmail.com

Person responsible for updating data

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

City
Sargodha

Province
Punjab

Postal code
40100

Phone
+92 48 6532916

Email
mushyyaida.iqbal127@gmail.com

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