Effects of Muscle energy Technique versus Bruegger’s Relief Exercise on the Forward Head Posture among the electronic gadget users - A Pilot study

Protocol summary

Study aim
Effects of Muscle Energy Technique versus Bruegger’s Relief Exercises on the Forward Head Posture, pain, function and ROM

Design
Two parallel group trial with single blinded outcome assessment. Sample size was 24. Randomization was centralized and computerized with concealed randomization sequence carried out at an external site.

Settings and conduct
District Head Quarter Hospital Khushab Road Sargodha. It is a single blinded study.

Participants/Inclusion and exclusion criteria
Inclusion criteria: Age: 18-35 years, male and female, Craniovertebral angle <52. Numeric Pain Rating Scale >3, Neck Disability Index >10, usage of smart phones for 4 hours or more per day. Exclusion criteria: Inflammation, neurological disorder, Neck pain radiating into arms, headache, Vertebrobasilar insufficiency, trauma fracture, therapeutic intervention or medical treatment.

Intervention groups
After taking baseline assessment, Groups A will be treated with Hot pack for 7-10 min and then Muscle energy technique will be performed, 4 weeks 3 sessions in a week MET applied to Upper trapezius, Levator scapulae, Scalene and the Pectoralis major muscles. Groups B will be treated with Hot pack for 7-10 min and then, Bruegger’s Relief Exercise. An elastic resistance band wrapped on each hand of the participant leaving the palm open then abduction and extend of thumb along with fingers, wrist extension and forearm supination, perform scapular retraction with shoulder external rotation, elbow extension, shoulder abduction, extension and chin tuck. Intervention will be starts from 10 sec hold to 30 sec with 2 sec increment in every session. Rest time would be 30 sec, 4 sets 12 times repetition.

Main outcome variables
Pain, Neck Disability Index, Range of motion and Craniovertebral angle

General information

Reason for update
Acronym
EMETBREFHP
IRCT registration information
IRCT registration number: IRCT20201019049069N3
Registration date: 2021-09-26, 1400/07/04
Registration timing: registered_while_recruiting

Last update: 2021-09-26, 1400/07/04
Update count: 0
Registration date
2021-09-26, 1400/07/04

Registrant information
Name
Hamna Afzal
Name of organization / entity
Riphah International University
Country
Pakistan
Phone
+92 48 3768660
Email address
hamnaafzal101@gmail.com

Recruitment status
Recruitment complete
Funding source

Expected recruitment start date
2021-08-11, 1400/05/20
Expected recruitment end date
2021-09-30, 1400/07/08

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title
Effects of Muscle energy Technique versus Bruegger’s Relief Exercise on the Forward Head Posture among the electronic gadget users - A Pilot study

Public title
Effects of Muscle Energy Technique versus Bruegger’s Relief Exercise on the Forward Head Posture among the electronic gadget users

Purpose
Treatment

Inclusion/Exclusion criteria

Inclusion criteria:
Age: participants having range 18-35 years both male and female are included. Craniovertebral angle<52 [NPRS]>3 and NDI>10. Patients having neck pain due to usage of smart phones or computers for 4 hours or more per day. Patients are willing to participate. Patients having neck pain due to sustained posture and after activity.

Exclusion criteria:

Age
From 18 years old to 35 years old

Gender
Both

Phase
N/A

Groups that have been masked
- Participant
- Outcome assessor

Sample size
Target sample size: 24

Randomization (investigator’s opinion)
Randomized

Randomization description
Written informed consent will be taken. After enrollment into study, patient will be allocated either to group A or Group B by lottery method. No. of Chits will be equal to total sample size, odd Numbers will be allocated to Group A and even number will be allocated to Group B. Each patient will be requested to draw a chit from the box and after that patient will be recruited into either Group A or Group B

Blinding (investigator’s opinion)
Single blinded

Blinding description
outcome assessor will be blinded by labeling the participants with different codes

Placebo
Not used

Assignment
Parallel

Secondary Ids
empty

Ethics committees

Ethics committee
Name of ethics committee
Ethical review committee of sargodha institute of health sciences, Government college university Fai
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/21/158

Health conditions studied

Description of health condition studied
Forward head posture is due to extension of upper cervical spine and flexion of lower cervical spine and cause neck pain

ICD-10 code
M54.2

ICD-10 code description
Cervicalgia

Primary outcomes

Description
pain

Timepoint
before treatment and after treatment (4th week)

Method of measurement
Numeric Pain Rating Scale (NPRS)

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

4

**Description**
Craniovertebral angle

**Timepoint**
before treatment and after treatment 4th week

**Method of measurement**
image J software

**Secondary outcomes**
empty

**Intervention groups**

1

**Description**
Intervention group: Before applying METs we will apply heat pack for 10-15 minutes. Protocol of Muscle Energy Technique. We will apply protocol for 4 weeks 12 Sessions (3 sessions in a week) and 10 sec rest between each segment with 3-5 times repetition than their will 7-10 second Isometric contraction followed by 5 second relaxation than 30 second hold for MET stretch. Effort and counter pressure will be modest(20%). Cervical spine non-thrust mobilization (Grade 3) will be given to each segment from C2-C7 will be followed by rest between segments. MET will be applied to Upper trapezius, Levator scapulae, Scalene and the Pectoralis major muscles. Following the 7-10 seconds isometric contraction and complete relaxation of all elements, the stretch is maintained for 30 seconds.

**Category**
Treatment - Other

Recruitment centers

1

**Recruitment center**
Name of recruitment center
District Headquarter Hospital Sargodha

Full name of responsible person
Hamna Afzal

Street address
Khushab Road, Sargodha, Punjab

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Email
hamnaafzal101@gmail.com

Sponsors / Funding sources

1

**Sponsor**
Name of organization / entity
District Headquarter Hospital Sargodha

Full name of responsible person
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Grant name
none

Grant code / Reference number
none

Is the source of funding the same sponsor organization/entity?
No

Title of funding source
District Headquarter Hospital Sargodha

Proportion provided by this source
100

Public or private sector
Public

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
District Head Quarter (DHQ) Hospital, Sargodha.
Full name of responsible person
Hamna Afzal
Position
Senior Lecturar
Latest degree
Master
Other areas of specialty/work
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Person responsible for scientific inquiries
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Position
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Latest degree
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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 information.
Study Protocol
No - There is not a plan to make this available
Statistical Analysis Plan
No - There is not 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