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An evaluation of therapy for postural neck-shoulder pain

Submission date
01/07/2021

Recruitment status
No longer recruiting

Registration date
08/07/2021

Overall study status
Completed

Last Edited
01/08/2022

Condition category
Musculoskeletal Diseases

[_] Prospectively registered
[_] Protocol
[_] Statistical analysis plan
[X] Results
[_] Individual participant data

Plain English summary of protocol

Background and study aims
Good posture is referred to the proper musculoskeletal alignment of the body between postural extremes. There has been mounting evidence in recent years identifying the static neck and shoulder posture that frequently assumed by office workers, as a possible risk factor in work-related neck and upper limb disorders. There is evidence that sustained forward flexion of the cervical spine results in increased compressive loading in the cervical spine and a creep response in the soft tissues. Although many spinal patients demonstrated clinically meaningful improvements in pain relief and functional recovery following the muscular intervention, the associatively underlying intervertebral posture relationship needed to be concerned for a better understanding the possible mechanism. In order to provide additional insights into the cervical biomechanics concerning postural neck-shoulder pain, this research project investigated the muscular intervention and monitored their intervention effects by videofluoroscopy and pressure measurement system.

Who can participate?
Adults over 18 years, with and without neck pain.

What does the study involve?
Participants were recruited from Taichung Veterans General Hospital and HUNGKUANG University to enroll in the study. The intervention group receives a deep friction massage for 8-weeks and the control group receives no intervention.

What are the possible benefits and risks of participating?
Participants in the intervention group may benefit from relaxing the muscle tightness and correcting postural. There are no risks involved.

Where is the study run from?
HUNGKUANG University (Taiwan)

When is the study starting and how long is it expected to run for?
June 2016 to July 2021

Who is funding the study?
Ministry of Science and Technology, Taiwan

Who is the main contact?
Shyi-Kuen Wu, rickwu01@gmail.com

Contact information

Type(s)
Scientific

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Additional identifiers

Clinical Trials Information System (CTIS)
Nil known

Protocol serial number
CRREC-105-011

Study information

Scientific Title
Postural neck-shoulder pain – therapeutic efficacy evaluation

Study objectives
There are no differences between healthy subjects and postural neck pain patients on intervertebral postural relationship and biomechanics

Ethics approval required
Old ethics approval format

Ethics approval(s)
Approved 09/06/2016, Research Ethics Committee China Medical University & Hospital (2 Ynde had, Trircbg, 40447, Taiwan (R.O.C.); +886-4-22052121 ext: 1925; rrec@mail.cmu.edu.tw), ref: CRREC-105-011

Study design
interventional randomized controlled trial

Primary study design
Interventional

Study type(s)
Treatment

Health condition(s) or problem(s) studied
Therapeutic efficacy evaluation on patients with postural neck-shoulder pain

Interventions
Thirty healthy adult subjects (15 males and 15 females) without neck symptoms within recent 4 weeks and thirty adult subjects (15 males and 15 females) who are diagnosed with postural neck-shoulder pain will participate in the study. The randomization is by sealed envelope the experimental group and control group.

The experimental group receives an 8-week deep friction massage intervention for the myofascial trigger points.

The control group receives no intervention.

Intervention Type
Behavioural

Primary outcome(s)
The intervertebral postural alignment for the C2/3 to C6/7 segments measured at baseline, and eight weeks using a videofluoroscopy system to capture the cervical spine motion, and transform it into 900 videofluoroscopic posture image sequences

Key secondary outcome(s))
At baseline, and eight weeks:
1. Neck disability measured using the neck disability index
2. Pain pressure threshold measured using the Coretac Pressure System

Completion date
31/07/2021

Eligibility

Key inclusion criteria
1. Presence of a palpable taut band in a skeletal muscle
2. Presence of a hypersensible tender spot in the taut band
3. Local twitch response elicited by the snapping palpation of the taut band
4. Reproduction of the typical referred pain pattern of the trigger point in response to compression
5. Spontaneous presence of the typical referred pain pattern and/or patient recognition of the referred pain as familiar

Participant type(s)
Mixed

Healthy volunteers allowed
No

Age group
Adult

Sex
All

Total final enrolment
60

Key exclusion criteria
1. History of cervical trauma or surgery
2. Bone pathology
3. Arthritic or other inflammatory disorders
4. Pregnancy
5. Restrictive muscle spasm

Date of first enrolment
02/08/2016

Date of final enrolment
07/07/2020

Locations

Countries of recruitment
Taiwan

Study participating centre
HungKuang University
No. 1018, Sec. 6
Taiwan Boulevard
Shalu Dist.
Taichung City
Taiwan
433

Study participating centre
Taichung Veterans General Hospital.
No. 1650, Sec. 4,
Taiwan Blvd.
Xitun Dist.

Taichung City
Taiwan
407219

Sponsor information

Organisation
Ministry of Science and Technology

ROR
https://ror.org/02kv4zf79

Funder(s)

Funder type
Government

Funder Name
Ministry of Science and Technology, Taiwan

Alternative Name(s)
Ministry of Science and Technology, R.O.C. (Taiwan), Ministry of Science and Technology of Taiwan, MOST

Funding Body Type
Government organisation

Funding Body Subtype
National government

Location
Taiwan

Results and Publications

Individual participant data (IPD) sharing plan
The current data sharing plans for this study are unknown and will be available at a later date

IPD sharing plan summary
Data sharing statement to be made available at a later date

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article		30/07/2022	01/08/2022	Yes	No