Effects of manual therapy for thoracic muscle pain

Submission date	Recruitment status		
20/06/2014	No longer recruiting		
Registration date 25/07/2014	Overall study status Completed		
Last Edited	Condition category		
29/03/2016	Musculoskeletal Diseases		

[] Prospectively registered

[] Protocol

[] Statistical analysis plan

[X] Results

[] Individual participant data

Plain English summary of protocol

Background and study aims

Skeletal muscles (muscles that are under our control, allowing us, for example, to move and maintain our posture) are electrically active, and the signals measured from skeletal muscle cells can be used to detect medical problems. When we are resting, our skeletal muscles are normally electrically inactive, but pain can cause an increase in electrical activity. This activity can be measured using an instrument called an electromyograph. This study will use an electromyograph to find out how well a new spinal manipulation technique developed for relieving pain in thoracic spine muscles (muscles in the middle of your back) performs compared to an established manipulation technique. If the new technique results in greater pain relief than the conventional treatment, the electromyograph will record less electrical activity.

Who can participate?

Participants aged between 18 and 30 with acute or chronic pain in their thoracic spine muscles.

What does the study involve?

Participants are randomly allocated to one of two groups. Participants in group 1 undergo the new spinal manipulation technique. Group 2 are treated using the established technique. Pain and tenderness felt by each participant and the electromyography activity of their thoracic spine muscles are measured before treatment begins, immediately after the treatment and a week after treatment.

What are the possible benefits and risks of participating? Not provided at registration

Where is the study run from? Alcalá University (Spain)

When is the study starting and how long is it expected to run for? July 2014 to October 2014

Who is funding the study? Alcalá University (Spain) Who is the main contact? Dr Daniel Pecos-Martin daniel.pecos@uah.es

Contact information

Type(s) Scientific

Contact name Dr Daniel Pecos-Martin

Contact details Departamento de Enfermería y Fisioterapia Universidad de Alcalá Alcalá de Henares Spain 28871

Additional identifiers

EudraCT/CTIS number

IRAS number

ClinicalTrials.gov number

Secondary identifying numbers N/A

Study information

Scientific Title Manual therapy effects on the electromyographic activity of the thoracic erector spinal muscles

Study objectives

An anterior/posterior articular manipulation technique on the thoracic spine produces better changes in electromyography activity and the pain related with erector spinal muscle.

Ethics approval required Old ethics approval format

Ethics approval(s) Alcalá ethics committee, 3/2/2014, ref. M2013/044/20140131

Study design Single-blind randomized clinical trial

Primary study design

Interventional

Secondary study design

Randomised controlled trial

Study setting(s) Other

Study type(s)

Treatment

Participant information sheet

Not available in web format, please use the contact details below to request a patient information sheet

Health condition(s) or problem(s) studied

Subjects with localized pain in the thoracic region of the back. Musculoskeletal pain related to activity.

Interventions

1. Experimental group: application of a PA contact mobilization using the T7 vertebra pisiforme about 3 minutes, with 20 seconds interval, with a frequency of 1 to 2 Hz. The mobilization amplitude grade III was applied.

2. Placebo group: application of a PA contact mobilization using the T7 vertebra pisiforme about 3 minutes, with 20 seconds interval, with a frequency of 1 to 2 Hz. The mobilization to a lower grade was applied as described by Maitland

Intervention Type

Procedure/Surgery

Primary outcome measure

Electromyography activity of thoracic spine muscles

Secondary outcome measures

Pain in thoracic spine muscles

The primary and secondary outcomes will be measured before treatment, immediately after and, finally, a week later. Instruments used: 1. Pain: VAS 2. Tenderness: Algometry 3. Muscle activity: superficial electromyography

Overall study start date 01/07/2014

Completion date 01/10/2014

Eligibility

Key inclusion criteria

Acute or chronic pain in the thoracic spine of nonspecific origin
 Aged 18 to 30 years
 Body Mass Index (BMI) < 29

Participant type(s) Patient

Age group Adult

Lower age limit 18 Years

Sex Both

Target number of participants 42

Key exclusion criteria

 Previous history of surgery
 Cardiovascular disorders
 Neurological, musculoskeletal, osteoporosis, tumor, cancer diseases, radicular pain and / or neuropathy

Date of first enrolment

01/07/2014

Date of final enrolment 01/10/2014

Locations

Countries of recruitment Spain

Study participating centre Universidad de Alcalá Alcalá de Henares Spain 28871

Sponsor information

Organisation Alcalá University (Spain)

Sponsor details

Campus Externo, S/N Crta. Madrid - Barcelona, km 33,600 Facultad de Fisioterapia Att: Daniel Pecos-Martin Alalá de Henares Spain 28871

Sponsor type University/education

ROR https://ror.org/04pmn0e78

Funder(s)

Funder type University/education

Funder Name Alcalá University (Spain)

Results and Publications

Publication and dissemination plan Not provided at time of registration

Intention to publish date

Individual participant data (IPD) sharing plan

IPD sharing plan summary

Not provided at time of registration

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<u>Results article</u>	results	01/03/2017		Yes	No