

# Effects of CO2 infrared laser moxibustion on patients with knee osteoarthritis

<b>Submission date</b> 22/08/2013	<b>Recruitment status</b> No longer recruiting	<input type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
<b>Registration date</b> 06/09/2013	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan <input checked="" type="checkbox"/> Results
<b>Last Edited</b> 17/12/2020	<b>Condition category</b> Musculoskeletal Diseases	<input type="checkbox"/> Individual participant data

## Plain English summary of protocol

### Background and study aims

Osteoarthritis, a common joint disorder, is the most common form of arthritis in the world. The knee joint is the most common site affected by osteoarthritis in the oriental population. Joint pain caused by knee osteoarthritis can severely impair the patients quality of life. The purpose of this study is to observe whether a Chinese medicinal therapy, infrared laser moxibustion, provides greater relief from pain and joint stiffness and improved function.

### Who can participate?

Patients aged 50 years or older, male or female, undergoing knee osteoarthritis treatment can participate in the study.

### What does the study involve?

Patients with knee osteoarthritis were randomly divided into real and sham laser moxibustion groups. Patients received 10.6  $\mu\text{m}$  infrared laser moxibustion and sham laser moxibustion treatment. Patients in both groups received 20 minutes of treatment, three times per week for 4 weeks. The effects of treatment were assessed before, mid-term (after 2 weeks), at the end (after 4 weeks) and 4 weeks post-treatment termination. Time taken to walk 50 yards was also calculated.

### What are the possible benefits and risks of participating?

Infrared laser moxibustion can reduce pain and improve knee joint stiffness and function in patients with knee osteoarthritis. Some patients have had local skin flushing or blistering (not instantly, but usually one day after treatment) at the site of irradiation. Usually the blister was naturally absorbed within a day or two without obvious scarring of the skin.

### Where is the study run from?

Longbai Community Health Service Center in Shanghai Minhang District, China.

### When is the study starting and how long is it expected to run for?

The study started in August 2010 and recruitment ended in July 2011.

Who is funding the study?

The study was supported by:

1. National Basic Research Program of China
2. National Natural Science Foundation of China
3. The Key Program of State Administration of Traditional Chinese Medicine of China
4. The Shanghai Municipal Science Foundation

Who is the main contact?

Prof. Xueyong Shen

sxy1@shutcm.edu.cn

## Contact information

### Type(s)

Scientific

### Contact name

Prof Xueyong Shen

### Contact details

9408, 1200 Cailun Rd.

Shanghai

China

201203

## Additional identifiers

### Protocol serial number

ChiCTR-TRC-12002338

## Study information

### Scientific Title

Effects of CO2 infrared laser moxibustion on patients with knee osteoarthritis: a double-blind, randomized, controlled study

### Study objectives

The hypothesis is that the CO2 infrared laser moxibustion can reduce pain and improve knee joint stiffness and function in patients with knee osteoarthritis.

### Ethics approval required

Old ethics approval format

### Ethics approval(s)

Institutional Review Board of Shuguang Hospital Affiliated Shanghai University of Traditional Chinese Medicine.

The study was approved on 14 June 2007.

### Study design

Single-centred double-blind randomised controlled trial

## **Primary study design**

Interventional

## **Study type(s)**

Treatment

## **Health condition(s) or problem(s) studied**

Patients with knee osteoarthritis

## **Interventions**

Patients with knee osteoarthritis were randomly divided into real and sham laser moxibustion groups. Patients received 10.6 µm infrared laser moxibustion and sham laser moxibustion treatment on Dubi (ST-35) leg acupoint symmetrically. Patients in both groups received 20 minutes of treatment, three times per week for 4 weeks.

## **Intervention Type**

Other

## **Phase**

Not Applicable

## **Primary outcome(s)**

WOMAC (VAS3.1) Questionnaire was applied to assess the therapeutic effects in terms of joint pain, stiffness, and functional disorder of the participants after 2 weeks and 4 weeks of the treatment initiation, and the long-term effects were also assessed 4 weeks post-treatment.

## **Key secondary outcome(s)**

The 50-yard walking time was assessed and recorded among the participants after 2 weeks and 4 weeks of the treatment as well as 4 weeks post-treatment to observe improvements in walking. In the follow-up, we asked the participants to assess their therapeutic effects and guess their group assignment to assess the masking effectiveness of the trial. Additionally, the participants would also be asked whether they thought the treatment were safe.

## **Completion date**

31/07/2011

# **Eligibility**

## **Key inclusion criteria**

1. Middle-aged and aged individuals, aged 50 years or older, male or female
2. According to the knee OA diagnostic criteria of the American College of Rheumatology, radiographic evidence of at least 1 osteophyte at the tibiofemoral joint (KellgrenLawrence grade II or III)
3. Moderate or greater clinically significant knee pain on most days during the past month
4. No acupuncture or moxibustion treatment received in the previous 3 months
5. Willingness to be randomly assigned; understanding and signing the informed consent

## **Participant type(s)**

Patient

**Healthy volunteers allowed**

No

**Age group**

Adult

**Sex**

All

**Key exclusion criteria**

1. Diagnosis with inflammatory arthritis, gout, acute knee joint injury or other knee arthritis (without cartilage involvement), meniscus injury, ligament injury and intra-articular fracture
2. Presence of serious heart diseases, kidney diseases, liver diseases or malignant tumors (unless the patient was surgically treated and with no relapse more than 5 years), systemic infection or contagious diseases
3. Intra-articular corticosteroid or hyaluronate injections (as well as any knee surgery or topical use of medication) during the past 6 months, or previous history of knee surgery
- 4 Previous experience with drug tests

**Date of first enrolment**

01/08/2010

**Date of final enrolment**

31/07/2011

## **Locations**

**Countries of recruitment**

China

**Study participating centre**

9408, 1200 Cailun Rd.

Shanghai

China

201203

## **Sponsor information**

**Organisation**

Shanghai University of Traditional Chinese Medicine (China)

**ROR**

<https://ror.org/00z27jk27>

# Funder(s)

## Funder type

Government

## Funder Name

National Basic Research Program of China (2009CB522901)

## Funder Name

National Natural Science Foundation of China (81202648)

## Alternative Name(s)

Chinese National Science Foundation, Natural Science Foundation of China, National Science Foundation of China, NNSF of China, NSF of China, National Nature Science Foundation of China, Guójiā Zìrán Kēxué Jījīn Wěiyuánhùi, , NSFC, NNSF, NNSFC

## Funding Body Type

Government organisation

## Funding Body Subtype

National government

## Location

China

## Funder Name

The Key Program of State Administration of Traditional Chinese Medicine of China and the Shanghai Municipal Science Foundation (11DZ1973300)

# Results and Publications

## 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?
<a href="#">Results article</a>	results	01/06/2020	17/12/2020	Yes	No

