



## Asian Pacific Journal of Tropical Medicine

journal homepage: [www.apjtm.org](http://www.apjtm.org)



doi: 10.4103/1995-7645.268165

Impact factor: 1.77

# Treating nonspecific low back pain by SET sling exercise therapy combined with tropical herb-Rattan Moxibustion liquid external rubbing therapy

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**Objective:** To explore the clinical effects of tropical *Eucommia ulmoides* compound-Rattan Moxibustion liquid external rubbing therapy which is from medicine of Li Nationality in Hainan combined with SET sling exercise therapy technique and lumbar-abdominal muscle training program on treating nonspecific low back pain (NLBP) as well as its influence on serum 5-hydroxytryptamine and beta-endorphin levels.

**Methods:** From June 2016 to June 2018, 42 NLBP patients were admitted to the outpatient and ward of Rehabilitation Department of the First Affiliated Hospital of Hainan Medical College, who were randomly divided into control group ( $n=21$ ) and experimental group ( $n=21$ ). On the basis of traditional massage manipulation, the control group adopts lumbar and abdominal muscles training, while Rattan Moxibustion liquid external rubbing therapy combined with SET sling exercise therapy was used in the experimental group. The treatment was given once every other day, three times a week and 20 min each time for 8 weeks. Then ODI index and VAS scale of low back pain, as well as serum 5-HT and beta-EP levels were observed and detected.

**Results:** The improvement in low back pain index ODI index of the experimental group were better than that of the control group (control group from  $21.23 \pm 1.57$  to  $4.78 \pm 0.86$  while experiment group from  $21.27 \pm 1.36$  to  $2.75 \pm 0.64$  after 8 weeks' treatment) ( $P < 0.05$ ). VAS scale decreased significantly in the experiment group compared with control group (control group from  $6.62 \pm 1.51$  to  $2.71 \pm 0.92$  while experiment group from  $6.71 \pm 1.55$  to  $1.83 \pm 0.79$  after 8 weeks' treatment) ( $P < 0.05$ ). Serum 5-HT in the experimental group were significantly improved compared with those in the control group [control group from  $(70.15 \pm 20.64)$  ng/mL to  $(127.34 \pm 40.59)$  ng/mL while experiment group from  $(68.72 \pm 19.18)$  ng/mL to  $(142.65 \pm 38.72)$  ng/mL after treatment] ( $P < 0.05$ ) and beta-EP level ameliorates compared with control group [control group from  $(180.63 \pm 51.87)$  pg/mL to  $(225.76 \pm 57.63)$  pg/mL while experiment group from  $(172.39 \pm 50.72)$  pg/mL to  $(251.26 \pm 62.89)$  pg/mL after treatment] ( $P < 0.05$ ).

**Conclusions:** Tropical herb-Rattan Moxibustion liquid external rubbing therapy combined with SET sling exercise therapy technology shows significant effects on NLBP. The mechanism may be related to the improved serum 5-HT and beta-EP levels.

**Keywords:** Nonspecific low back pain; SET sling exercise therapy; Tropical Herb-Rattan moxibustion liquid external rubbing therapy; *Eucommia ulmoides* compound

### Article history:

Received 4 September 2019

Revised 20 September 2019

Accepted 26 September 2019

Available online 7 October 2019

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Foundation project: This study was funded by the Natural Science Foundation of Hainan Province (Grant No. 818QN248), the National Natural Science Foundation of China (Grant No. 81574095), Educational Science Research Foundation of Hainan Medical University (Grant No. HYP201714).

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**How to cite this article:** Niu K, Niu Q, Xie YQ, Yang F. Treating nonspecific low back pain by SET sling exercise therapy combined with tropical herb-Rattan Moxibustion liquid external rubbing therapy. Asian Pac J Trop Med 2019; 12(Suppl 1): 13.