

Effect of a passive movement using central posteroanterior technique on the spinous process of L4 on range of motion of the straight leg raising test in normal subjects

Torkamol Kamolrat¹, Wanida Donpunha², Suphannika Ladawan², Supatra Prasattong²

The purpose of the present study was to assess the effect of a passive movement using central posteroanterior (PA) technique on the spinous process of L4 on range of motion (ROM) of the passive straight leg raising test (SLR) in normal male subjects. Fifty-four male subjects aged between 18-25 years were randomly assigned into two groups: control and experimental groups ($n=27/\text{group}$). Subjects in the experimental group were treated by lumbar mobilisation: PA technique grade 4- on the spinous process of L4 for 3 minutes. Subjects in the control group were treated by placebo mobilisation on the spinous process of L4 for 3 minutes. The ROM of SLR was measured by a plastic goniometer at before and after the application of mobilisation. At after the application, means of change of the ROM of SLR in left leg of the experimental and control groups were 2.17 and -0.44 degree, respectively and the result showed no significant difference between the group ($p=0.06$). Means of change of the ROM of SLR in right leg of the experimental and the control groups were 0.55 and -2.22 degree, respectively and the result showed no significant difference between the group ($p=0.07$). Therefore, the result of the present study demonstrated that lumbar mobilisation might not be produced increase in the ROM of SLR in normal male subjects. However, further study could be considered to study in low back pain patients.

¹Department of Physical Therapy, Faculty of Associated Medical Sciences, Khon Kaen University

²The 4th year student, Faculty of Associated Medical Sciences, Khon Kaen University