

Influence of Painful Passive Exercise on Blood Pressure

Keiko INOUE¹⁾, Tetsuya NISHIMOTO²⁾ and Susumu WATANABE³⁾

Department of Restorative Science Faculty of Medical Professions Kurashiki, Okayama, 701-0193, Japan¹⁾

Department of Restorative Science Faculty of Medical Professions Kurashiki, Okayama, 701-0193, Japan²⁾

Department of Restorative Science Faculty of Medical Professions Kurashiki, Okayama, 701-0193, Japan³⁾

(Accepted 2000-05-15 00:00:00+09)

Key words: blood pressure, passive exercise, muscle stretching pain

Abstract

To obtain basic data for risk management, the influence on blood pressure of pain when stretching leg muscles during passive exercise was examined. Ten healthy subjects, 19-22 years of age, performed two kinds of Straight Leg Raise Tests with their left legs. In one test, the leg was raised as high as possible without any pain (Test 1). In the second test, the leg was raised until subjects complained of pain because of muscle stretching (Test 2). During the tests, systolic (SBP) and diastolic blood pressure (DBP) were monitored continuously at the right radial artery using a non-invasive blood pressure measuring apparatus. No significant differences were found in maximal and minimal SBP and DBP values during Test 1 when compared with those during the resting period. However, maximal SBP and DBP values during Test 2 were significantly higher than those during Test 1 and the resting period. In addition, minimal DBP values during Test 2 were significantly higher than those during the resting period. These results indicate that occupational and physical therapists should manage the risk of changes in blood pressure more carefully when patients complain of muscle stretching pain during passive exercise.
