Abstract

Title: The Affinity of Thoracic Outlet Syndrome and Chronic Finger Pain in Climbers

Objectives: To determine possible affinity between thoracic outlet syndrome (TOS) and chronic finger pain in climbers by comparing the occurrence of TOS among climbers with chronic finger pain, climbers without chronic finger pain, and non-climbers.

Methods: Sixty-six participants of both genders aged 18-40 were included in the study. Based on the initial questionnaire, they were divided into three groups: climbers with chronic finger pain, climbers without chronic finger pain, and non-climbers. The homogeneity of the groups based on quantitative characteristics was assessed using an ANOVA test. All study participants were examined using the same examination protocol for the presence of Thoracic Outlet Syndrome (TOS). The examination protocol consisted of three questions about clinical symptoms, five examination tests, and palpation of the scalene and pectoralis minor muscles. A positive finding of TOS was defined as a positive result of 60 % or more of the examination protocol tests. The frequency of positive TOS findings was subsequently compared between the group of climbers with chronic finger pain, climbers without chronic finger pain, and non-climbers. Furthermore, the frequency of positive results was compared among climbers with chronic finger pain on the upper limb side and on the upper limb side without chronic finger pain. Descriptive statistics and parametric tests were used for statistical analysis. Data obtained from the examination protocol were evaluated using the Chi-square test. The significance level was set at 5 % ($\alpha = 0.05$).

Results: At the 5 % significance level, a higher incidence of TOS was demonstrated among climbers with chronic finger pain compared to non-climbers. No significant difference in the occurrence of TOS was found between climbers with chronic finger pain and climbers without chronic finger pain, nor between climbers and non-climbers. Among climbers with chronic finger pain, a higher prevalence of TOS was observed in the upper extremity where the painful finger is located.

Keywords: Thoracic Outlet Syndrome, chronic finger pain in climbers, soft tissue healing, perfusion, tendinopathy, tenosynovitis