Abstract

Title: The relationship of the joint blockage and muscle spasm

Objectives: The main aim of this study is to summarize the current knowledge on the relationship between functional joint blockade and chained muscle spasm. In the experimental part, the main aim is to verify the relationship between sacroiliac joint blockade and musculus piriformis using combined therapy as a diagnostic tool, where the main parameter to be observed will be the intensity of musculus piriformis irritation before and after sacroiliac joint mobilization.

Methods: The research sample consisted of people aged 18-60 years. The probands were randomly divided into experimental and control groups. All probands were subjected to the Oswestry disability index questionnaire survey, underwent initial palpation of the m. piriformis and pain levels were determined using a numerical pain scale, and all underwent measurement of the m. piriformis irritability threshold using the BTL 4000 Topline instrument. The experimental group subsequently underwent a therapeutic intervention in the form of mobilization of the SI joint using the Stoddard technique and three other mobilization techniques according to Ludmila Mojžíšová. This was followed by 30 minutes of relaxation. The control group was completely without therapeutic intervention and had only 30 minutes of relaxation between the initial and final examination. Both groups were then given the same exit examination as at baseline, except that the Oswestry Disability Index questionnaire was administered 7 days after the baseline measurement.

Results: The results show an increase in the threshold of electrical excitability of the musculus piriformis in the experimental group before and after sacroiliac joint mobilization. In addition, there was a decrease in pain on the numerical pain scale during palpation of the m. piriformis. At the same time, there was a decrease in the percentage value of the disability measure. In the control group, there were minimal changes in all of the observed values.

Keywords: muscle spasm, sacroiliac mobilization, combined therapy, muscle chains, functional block