Abstract

The theoretical part of the thesis describes basic mechanisms of spinal cord injuries, summarizes respiratory complications of spinal cord injuries and the use of respiratory physiotherapy with emphasis on breathing trainers. The practical part of the thesis focuses on the effect of 6 week long inspiratory muscle training using the Threshold IMT or Powerbreathe breathing trainer on respiratory functions in patients with chronic tetraplegia, as well as comparing the results of the study with available research exploring the same issue. The research included one experimental group consisting of 15 probands. All probands underwent measurement of spirometry parameters prior to the therapeutic intervention and again after six weeks of breathing training. A total of six respiratory parameters were evaluated (FVC, FEV1, PEF, PCF, MIP, MEP). From the results of the study, it can be concluded that breathing training showed positive effects on all of these parameters, but statistically significant difference was demonstrated only in the parameters evaluating the strength of the inspiratory (MIP) and expiratory (MEP) muscles.