

Abstract

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Title: Physiotherapy of children with lung disease

Objectives: The aim of this thesis is to create a targeted therapeutic program for school-age children diagnosed with bronchial asthma and to evaluate the change of the examined parameters (FEV1, dyspnoea, muscle imbalance, resting breathing wave, diaphragm test, five-minute running test with a focus on post-exercise dyspnoea, viscerovertebral manifestations) after four weeks of movement in two groups (one focused on respiratory physiotherapy, the other on respiratory physiotherapy enriched with yoga exercise), both diagnosed with bronchial asthma.

Methods: This work is a pilot experimental study. Two groups of probands (test and control, each with eight probands) were created. The test group underwent respiratory physiotherapy and yoga exercise specifically designed for diagnosis bronchial asthma. The control group underwent only respiratory physiotherapy. Both groups had an intervention of four weeks. In both groups, FEV1 and Investigation Protocol – focusing on viscerovertebral manifestations, muscle imbalance, resting respiratory wave, five-minute running test (focusing on any manifestation of dyspnoea that would end the test, or after the test dyspnoea) and manifestations of dyspnoea (dyspnea in two previous weeks treated with acute drugs) – were examined before and after interventions.

Results: The statistical processing of results was adjusted for a smaller number of probands. The results were processed statistically (FEV1, Chapman points and Head zones), but also graphically using tables and graphs (muscle imbalances, resting breathing wave, diaphragm test, dyspnoea rate, five-minute running test). Statistically significant results were obtained for Chapman points (p -value 0,002) and Head zones (p -value 0,001) with the benefit for the test group. Other parameters (dyspnea frequency, resting breathing wave, diaphragm test, five-minute running test) were also better in the test group. Spirometry focused on FEV1 showed no significant results in any of the groups.

Keywords: asthma bronchiale, physiotherapy, viscerovertebral manifestations, yoga