

Efficacy of physical therapy on cervical muscle activity and on body posture in school-age mouth breathing children.

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INTRODUCTION: The mouth breathing resulting from nasal obstruction has been highly incident, mostly as a consequence of allergic rhinitis. In children, such condition is more concerned because it causes alteration during their development, which may generate deformities. **OBJECTIVE:** To evaluate the efficacy of a program of combined postural exercise and breathing, on the cervical muscles and body posture in school-age mouth breathing children. **MATERIALS AND METHODS:** Nineteen mouth breathing children, mean age of 10.6 years, both genders, were recruited either from a public school or from a speech-therapy service. The evaluation procedures were electromyographic recordings from the sternocleidomastoid (SCM), sub-occipitals (SOC) and upper trapezius (UT) muscles and computerized photographic analysis pre and post-treatment. The subjects were submitted to a 12-week of a Physical Therapy Program (PTP) consisted by (a) muscular stretching and strengthening exercises using a Swiss ball combined to (b) naso-diaphragmatic re-education. **RESULTS:** There was a significant reduction ($p < 0.05$) in the electrical activity on the assessed muscles during quiet position (5, 19 and 7.1% to 3, 2 and 10.3% for SCM, SOC and UT, respectively) and aligned posture (7, 19 and 8% to 4, 9 and 2.6% for SCM, SOC and UT, respectively) after treatment. Improvement in the postural deviation, especially reduction in forward head posture and abducted scapula were demonstrated in the computerized photographic analysis. **CONCLUSION:** A combination of postural and breathing exercises was effective in restoring muscle imbalances and posture in a group of school-age mouth breathing children, as measured by changes in electrical activity and positional data.

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