**Aerobic Physical Exercise Program Can Improve Quality of Life in Patients with Temporal Lobe Epilepsy**

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**Introduction:** Epilepsy is a frequent neurologic disorder, with variable clinical manifestations.

Temporal Lobe Epilepsy (TLE) is the most common epileptic syndrome in adults, and one of the most refractory to antiepileptic drugs. The diagnosis of TLE leads to changes in how patients picture themselves in their social and economic circles, and usually affects their future plans. Therefore, this diagnosis endangers not only their physical health but also compromises their quality of life (QOL). Ideally, the treatment of epilepsy should go beyond the seizure control, and include complementary actions to improve both well being and emotional state. Despite the scientific evidences showing that physical exercise (PE) contributes to QOL of subjects with different pathologies, there are still controversies related to the benefits of PE to people with epilepsy. The objective of the present study was to evaluate the effect of 16 weeks of an aerobic physical exercise program in the aerobic capacity, and QOL of patients with TLE.

**Materials and Methods:** We recruited 25 TLE patients, divided in two groups: the training group (T), which practiced the aerobic physical exercise program, and the control group (C), which was instructed to maintain their normal daily habits. Both groups underwent all procedures before and after period of intervention. Quality of life: was evaluated with QOLIE31 (it evaluates the total score of QOL, along with seven sub-items). Maximal effort cardiopulmonary test in treadmill: A graded protocol was used to determine the individual VO2max. Aerobic physical exercise program: The PE program was based on sessions of walking exercise, twice a week, during 16 weeks. Each session lasted 60 minutes, with the intensity based on the individual aerobic threshold identified during the maximal effort test. Statistical Analysis: Using the software SYSTAT 9 (SPSS Inc., Chicago, IL), we conducted paired t-tests and Wilcoxon tests to compare variables before and after exercise.

**Results:** Before the intervention: we didn’t observe significant group differences, regarding QOL, the sub-items, and aerobic physical capacity (VO2máx). After the period of intervention: group T presented significant improvement of 31% in total score of QOL, and the sub-items: Seizure Worry, Overall Quality of Life, Well-Being, Energy/Fatigue, Cognitive and Social Function. In addition, there was an improvement of 6% in aerobic physical capacity. Although the group C presented a significant decrease of 11% in total score of QOL (p=0.03), and in the sub-items (Well-Being, Cognitive and Social Function), the aerobic physical capacity was maintained. After all, there were differences between groups, with better QOL, well being and cognitive function for Group T.

 **Discussion:** People with epilepsy, especially refractory to treatment, are prone to an inactive lifestyle; therefore, these patients should be counseled by doctors, physical educators and health professionals about the health risks over the sedentary lifestyle and the fear of risk of injury during a PE session. Taking into account the low risk and the benefits of PE for this population, strong efforts should be directed to stimulate PE. Ideally, we hope that in the future such actions can be offered as part of a more global approach for all subjects with epilepsy.

**Conclusion:** The intervention of 16 weeks of aerobic PE was effective to increase the TLE patient’s QOL and physical capacity, showing that it can be a complementary action to the conventional treatment, improving the general heath as the well being.

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