

MEETING ABSTRACT

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EHMTI-0200. Aerobic exercise training at the ventilatory threshold prevents migraine and improves mood

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Introduction

The ventilatory threshold (VT) is a standardized, individual parameter of metabolic demand during exercise. No study on the preventive effect of aerobic exercise training (AE) for migraine (M) has used the VT.

Aims

To measure changes in M clinical outcomes and mood state after a standardized AE program.

Methods

The study recruited episodic M patients with and without aura (ICHDII) taking no preventive medicine. Study protocol comprised 12-week of AE, performed 3 times/wk, 30 min./session at the VT. Participants were randomly allocated for AE (EXE) or waiting list (CT) groups. VT was determined by a computerized open-circuit gas analyser during maximal cardiopulmonary exercise test for assessment of aerobic fitness (VO₂max). The corresponding heart rate, workload, and perceived effort at VT were used to monitor AE intensity. Days with M (Days), M frequency (FREQ), disability (DIS), medication (MED), depression (BECKII), anxiety (GAD7) and mood (POMS) were measured at baseline and after AE.

Results

25 patients (EXE, N = 13; CT, N = 12) completed the study. All participants' characteristics and baseline measurements matched between groups. CT changed no post-intervention variable. For EXE, there were reduction in DAYS (8.9±3.6 vs 5.6±3.4, p = 0.002), FREQ (6.3±3.0 vs 3.8±2.4, p = 0.002), POMS (27.3±35.1 vs 6.7±13.1,

p = 0.038), GAD7 (7.2±5.1 vs 4.2±3.3, p = 0.034), and a trend to decrease in BECKII (6.3±3.0 vs 3.8±2.4, p = 0.067), and increase in VO₂max (30.8±6.5 vs 32.1±5.5, p = 0.049) after AE.

Conclusions

Metabolic-matched AE using VT prevented M and improved mood.

No conflict of interest.

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