The effects of aerobic exercise for persons with migraine and co-existing tension-type headache and neck pain. A randomized controlled clinical trial.

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BACKGROUND

• In a specialised headache centre, 67% of persons with migraine suffer from co-existing tension-type headache (TTH) and neck pain (NP).

• The prognosis of migraine may worsen with co-existing TTH, and NP has been found to be a predictor of increased disability in persons with migraine.

• There is increasing evidence of the effectiveness of physical activity in migraine.

• This has not yet been studied for migraine and co-existing TTH and NP.

AIM

To evaluate the effect of aerobic exercise for persons suffering from co-existing migraine, TTH and NP.

RESULTS

• 52 persons completed the study.

Primary endpoint

Exercise group

Migraine days: 9.2 → 7.2 (p = 0.025).

Control group

Migraine days: 8.3 → 7.7 (p = 0.44)

No significant difference between groups.

Secondary endpoints

• Significant improvements for exercise group compared to control group for:
  - physical fitness - level of physical activity - migraine burden - the ability to engage in physical activity because of TTH and NP.
  - Otherwise no differences for TTH and NP between groups.

CONCLUSION

There was no difference between groups regarding migraine frequency. However, a significant reduction was found for exercise group for migraine frequency, pain intensity and duration; migraine burden, physical fitness and well-being.

Aerobic exercise improved the ability to engage in physical activity because of TTH and NP compared to controls.

Aerobic exercise significantly reduced migraine burden and increased physical fitness compared to controls, and can be recommended as a supplement to medical treatment of migraine.

METHODS

• Prospective, single-centre, open-label, randomised and controlled clinical trial.

4-week run in

Baseline

Exercise period

Treatment end

3 months

Follow-up

6 months

• 70 persons with migraine and co-existing TTH and NP were recruited and randomised into an exercise group or control group.

• Exercise lessons were bike/cross-trainer/brisk walking for 45 minutes, 3 times/week for 3 months.

• Controls continued their usual daily activities.

• Primary endpoint was difference in number of migraine days.

• Primary and secondary endpoints were measured from baseline to the end of treatment and from baseline to follow-up.

CONCLUSION

There was no difference between groups regarding migraine frequency. However, a significant reduction was found for exercise group for migraine frequency, pain intensity and duration; migraine burden, physical fitness and well-being.

Aerobic exercise improved the ability to engage in physical activity because of TTH and NP compared to controls.

Aerobic exercise significantly reduced migraine burden and increased physical fitness compared to controls, and can be recommended as a supplement to medical treatment of migraine.

The burden of migraine - Perceived ability to engage in daily activities in the exercise group

Score: 0-10. 0 = no decrease; 10 = decreased to the greatest possible extent

= p < 0.05