Effects of a six-month aerobic exercise training in haemodialysis patients with restless legs syndrome: a randomised controlled trial

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Background

Restless legs syndrome (RLS) affects a significant proportion of patients undergoing haemodialysis (HD) therapy. So far, limited evidence exists regarding the long-term effect of exercise training in uremic RLS. This is the first randomised controlled study that examines the effects of a 6-month exercise program on RLS symptoms in HD patients with RLS.

Methods

Twenty-four HD patients were randomly assigned into two groups: the exercise training group (N= 12) and the sham exercise (control) group (N= 12). The exercise session in both groups included intradialytic cycling for 45 min at 50 rpm, however, only in the exercise group was resistance applied, at 60-65% of max exercise capacity which was reassessed every 4 weeks to account for patients' improvement. The severity of RLS symptoms was evaluated using the IRLSSG severity scale while sleep quality, depression levels and daily sleepiness status were assessed via validated questionnaires, before and after the training period.

Results

All patients were able to complete the training period with no adverse effects. RLS symptom severity declined by 58% (P=0.003) in the exercise group, while no significant changes were observed in the sham exercise control group (17% change, P=0.124). Exercise was also effective in terms of improving sleep quality scores and depression levels in HD patients, with no significant changes in the control group.

Conclusion

A six-month intradialytic exercise programme appears to be a safe and effective approach in reducing RLS symptom severity in HD patients. It seems that the exercise-induced adaptations to the whole body are responsible for the reduction in RLS severity score, since the sham exercise protocol (exercise with no resistance) failed to improve the RLS severity status of the patients.