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Adapted home-based cardiac rehabilitation following a TIA or
minor stroke? A pilot randomised trial of 'The Healthy Brain
Rehabilitation Manual'

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Abstract

Objective

Secondary prevention, including positive lifestyle change and exercise/physical activity, after transient ischaemic attack (TIA) or minor stroke is important but the best way to effectively implement this is uncertain. Cardiac rehabilitation (CR) delivers effective secondary prevention for coronary heart disease but its value after a TIA or minor stroke is untested despite these conditions sharing similar pathology. We aimed to pilot a trial of a novel home-based prevention programme (*'The Healthy Brain Rehabilitation Manual'*), adapted from home-based CR, for patients with a TIA or 'minor' stroke.

Design

Pilot randomised controlled trial.

Subjects

Patients within 4 weeks of their first TIA or 'minor' stroke.

Intervention

Patients received study information from clinicians in 4 hospitals and were randomly allocated to: (1) standard care (control group) (n=12); (2) standard care, manual and GP follow-up (n=14); (3) standard care, manual and stroke nurse follow-up (n=14). All participants received telephone follow-up at 1, 4 and 9 weeks. The manual included information about TIA/stroke, discussed a different lifestyle risk factor each week for 6 successive weeks and promoted physical activity, using pedometer step-count targets.

Outcome measures

We assessed eligibility, recruitment and retention rates; measured stroke/cardiovascular risk factors, including body mass index (BMI), blood pressure, physical activity (questionnaire; accelerometer), diet (validated questionnaire) and functional measures (2-minute walk test; Timed-Up-and-Go test) at baseline and 12 weeks post-enrollment; and elicited participants' views about the study via focus groups.

Results

Over a 32-week period, 28% of clinic attendees (125/443) were eligible; 35% (44/125) consented to research contact; 91% (40/44) participated: 98% (39/40) completed the study. At baseline most participants were overweight, physically inactive and had unhealthy diets. After 12 weeks, intervention groups' BMI, diet, physical activity (questionnaire and objective measures) and functional performance improved. The research methods and programme were acceptable to patients and health professionals; the programme was perceived to 'fill gaps' in current post-TIA management.

Conclusions

Our findings indicate that implementation of this novel home-based CR programme, and of a trial to evaluate its effectiveness, is feasible, with potential for clinically important benefits, increasing physical activity and improving secondary prevention following a TIA or 'minor' stroke.

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