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[Intervention Review]

Home-based versus centre-based cardiac rehabilitation

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ABSTRACT

Background

The burden of cardiovascular disease world-wide is one of great concern to patients and health care agencies alike. Traditionally centre-based cardiac rehabilitation (CR) programmes are offered to individuals after cardiac events to aid recovery and prevent further cardiac illness. Home-based cardiac rehabilitation programmes have been introduced in an attempt to widen access and participation.

Objectives

To determine the effectiveness of home-based cardiac rehabilitation programmes compared with supervised centre-based cardiac rehabilitation on mortality and morbidity, health-related quality of life and modifiable cardiac risk factors in patients with coronary heart disease.

Search methods

We updated the search of a previous review by searching the Cochrane Central Register of Controlled Trials (CENTRAL) in *The Cochrane Library* (2007, Issue 4), MEDLINE, EMBASE and CINAHL from 2001 to January 2008. We checked reference lists and sought advice from experts. No language restrictions were applied.

Selection criteria

Randomised controlled trials (RCTs) that compared centre-based cardiac rehabilitation (e.g. hospital, gymnasium, sports centre) with home-based programmes, in adults with myocardial infarction, angina, heart failure or who had undergone revascularisation.

Data collection and analysis

Studies were selected independently by two reviewers, and data extracted by a single reviewer and checked by a second one. Authors were contacted where possible to obtain missing information.

Main results

Twelve studies (1,938 participants) met the inclusion criteria. The majority of studies recruited a lower risk patient following an acute myocardial infarction (MI) and revascularisation. There was no difference in outcomes of home- versus centre-based cardiac rehabilitation in mortality risk ratio (RR) was 1.31 (95% confidence interval (CI) 0.65 to 2.66), cardiac events, exercise capacity standardised mean difference (SMD) -0.11 (95% CI -0.35 to 0.13), as well as in modifiable risk factors (systolic blood pressure; diastolic

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blood pressure; total cholesterol; HDL-cholesterol; LDL-cholesterol) or proportion of smokers at follow up or health-related quality of life. There was no consistent difference in the healthcare costs of the two forms of cardiac rehabilitation.

Authors' conclusions

Home- and centre-based cardiac rehabilitation appear to be equally effective in improving the clinical and health-related quality of life outcomes in acute MI and revascularisation patients. This finding, together with an absence of evidence of difference in healthcare costs between the two approaches, would support the extension of home-based cardiac rehabilitation programmes such as the Heart Manual to give patients a choice in line with their preferences, which may have an impact on uptake of cardiac rehabilitation in the individual case.

PLAIN LANGUAGE SUMMARY

Comparison of different modes of cardiac rehabilitation

Heart disease is one of the most common causes of premature death and ill health. Cardiac rehabilitation (CR) aims to restore people with heart disease to health through a combination of exercise with education and psychological support. Traditionally centre-based cardiac rehabilitation programmes (e.g. either based within a hospital, gymnasium or a sport centre setting) are offered to individuals after cardiac events, while home-based cardiac rehabilitation programmes have been introduced in an attempt to widen access and participation. The aim of this review has been to determine the effectiveness of home-based cardiac rehabilitation programmes compared with supervised centre-based cardiac rehabilitation.

The study population in the trials were mainly male with a mean age of 52-69 years. Study findings indicate that both home and hospital-based interventions are similar in their benefits on risk factors, health-related quality of life, death, clinical events and costs. There was some weak evidence to suggest that home-based interventions were associated with a higher level of adherence.

The limitations of the review are that the recruitment of the included trials was limited to stable coronary heart disease patients either following an acute-MI or revascularization, but no other cardiac populations, such as heart failure. There has been considerable diversity in the variety of centre-based and home-based cardiac rehabilitation interventions.

Related reviews, including four other Cochrane reviews, can be looked at for a fuller picture of a broader review and more conclusions about cardiac rehabilitation and the effectiveness of its specific contributant interventions and in CHD and heart failure populations.