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CARDIAC REHABILITATION IMPROVES FUNCTIONAL AND CLINICAL STATUS OF PATIENTS AFTER AMI OR PTCA - A RANDOMISED CONTROLLED STUDY

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Objective: This study is to evaluate whether cardiac rehabilitation program will have beneficial functional and clinical effects in patients after acute myocardial infarction (AMI) or percutaneous transluminal coronary angioplasty (PTCA).

Methods: A randomised, controlled study of 159 patients (114 males and 45 females), with mean age of 66 ± 11 years, were enrolled into either an intensive cardiac rehabilitation program (exercise and educational classes at the day rehabilitation centre by a multidisciplinary approach for 8 weeks [phase 2]) (CRP group) or optimal medical therapy at a ratio of 2:1. The functional status was assessed by quality of life (QOL) questionnaires and the clinical status was measured by exercise tolerance test and echocardiography, at the end of phases 1 (in-patient), 2 (out-patient), and 3 (community-based).

Results: The CRP group had better perception of health status after phase 2. These included improvement in physical functioning ($p < 0.001$) and role ($p < 0.001$), vitality ($p = 0.009$), social functioning ($p < 0.001$), emotional role ($p = 0.004$) and mental health ($p = 0.045$). Less anxiety ($p = 0.015$) and depression ($p = 0.04$) were detected that may be related to less severe symptoms being reported ($p = 0.012$) after phase 2. The improvement in QOL was maintained in phase 3 in general. Higher METS and longer exercise duration were achieved after both phases 2 and 3 ($p < 0.001$), though the net gain in METS (1.7 ± 1.8 Vs 0.7 ± 1.2 , $p = 0.001$) and exercise duration (2.1 ± 2.5 Vs 0.8 ± 1.5 , $p = 0.001$) was significantly larger in CRP than medical therapy group. Left ventricular ejection fraction was improved after phase 3 in only the CRP group ($p = .012$).

Conclusions: This study showed that the QOL, functional and clinical status of patients post AMI and PTCA were improved, which confirmed the usefulness of the cardiac rehabilitation program.

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COST-EFFECTIVENESS OF AN OUTPATIENT CARDIAC REHABILITATION PROGRAMME FOR PATIENTS AFTER MYOCARDIAL INFARCTION AND CORONARY ANGIOPLASTY

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The value of cardiac rehabilitation in the modern management of coronary artery disease is uncertain. We have been evaluating an outpatient cardiac rehabilitation programme in 159 patients after myocardial infarction and coronary angioplasty in a randomised controlled study. The active programme includes 16 visits which consist of patient education (20 hours), exercise sessions (24 hours) and occupational therapy (16 hours). 2 nurses, a clinical psychologist, a physiotherapist and an occupational therapist are involved. Costs include staff salary and rehabilitation equipment. Health status was assessed using a symptom questionnaire, illness intrusiveness rating scale and SF-36. Quality of life was assessed with a time trade-off questionnaire.

The cost of the rehabilitation programme was \$3850 per patient. There were improvements in health status as measured by SF-36, and patients felt more relaxed and contented ($p < 0.05$). Illness intrusiveness rating decreased compared to a parallel control group ($p = 0.02$). However, the gain in quality of life did not reach statistical significance ($p = 0.3$). We conclude that, as the cost of cardiac rehabilitation is modest, it should be considered in patients after myocardial infarction and coronary angioplasty because of improvements in health status.