5.1 The Role of a Cardiac Rehabilitation Programme on Risk Modification in Patients with Established Coronary Heart Disease

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ABSTRACT

Objective: To evaluate the effectiveness of a cardiac rehabilitation programme (CRP) on risk modification behaviour of patients following a major cardiac event.

Methods: A quasi-experimental pre-test post-test design was used to evaluate the CRP. The study was conducted at the National Hospital of Sri Lanka (NHSL) from July 2005 to August 2006. Patients admitted with a myocardial infraction (MI) to the Institute of Cardiology of the NHSL and all patients who underwent a coronary artery by-pass graft (CABG) surgery or a Percutaneous Transluminal Coronary Angioplasty (PTCA) during the study period were invited to participate in the CRP. Control group consisted of patients admitted with a MI to all medical wards at the NHSL. An interviewer-administered questionnaire with a food frequency questionnaire and a physical activity questionnaire was used to collect data. Weight, height, and waist and hip circumferences were measured adhering to standard protocols and using standardized instruments. Biochemical analysis of blood at follow up was done at the laboratory of the Nawaloka Group of Hospitals and the National Diabetes Centre.

Results: 91% of those who participated in the CRP (n=167) and 75% of the control group (n=168) were followed up at six months following the major cardiac event. There were significant changes in the risk profiles at six months in both groups when each group was taken separately. However, the absolute changes were seen only with regard to serum LDL cholesterol level (difference in improvement in the two groups=9.7%, p=0.015), quality of diet (difference in improvement in the two groups=19.3%, p<0.001), physical activity levels (difference in improvement in the two groups =22.2%, p<0.001) and smoking status (difference in improvement in the two groups=16%, p<0.001).

On multivariate analyses, attending the CRP was a significant independent predictor of improvement in serum LDL cholesterol level (OR=1.9, 95% CI 1.0-3.7), better quality of diet (OR=2.1, 95% CI 1.3-3.5) and increased physical activity levels (OR=7.7, 95% CI 3.1-18.9), irrespective of the individual's socio-demographic milieu.

Conclusion: This study demonstrated that those participating in a CRP had modified behavioural risk factors favourably when compared to a control group. Hence, setting up CRP should be encouraged where expertise and resources needed to set-up such programmes could be gathered.