Influence of Physiotherapy Follow up Programs on Quality of Life & Heart Rate Variability among Patients after Myocardial Ischemia & Angioplasty in Pakistan

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Abstract

Background & Objectives: Heart Rate Variability (HRV) and decreased Quality of Life (QOL) are among the major risk factors for deaths due to cardiac complication in Pakistan after angioplasty. In the past, various studies have been conducted on animals to investigate the influence of exercise programs. Plenty of evidences have been available which suggest the importance of such physical training programs to increase HRV and reduced mortality after cauterizations in human populations as well. In our recent studies, we have appraised the change in exercise capacity, quality of life and HRV in cardiac rehabilitation patients by randomizing them between either conventional or intensive physiotherapy follow up programs in Pakistan.

Methods: Prospective study design, stratified randomization was adopted and pre-specific subgroup analysis was also performed. Exercise tolerance test and Adopted Quality of Life Questionnaire at baseline, 4 and 12 months after Myocardial Infarction (MI) or Angioplasty. Sixty two patients including 43 with MI and 19 with Angioplasty were randomized with double blind randomization. Study subjects were randomly allocated to either twice weekly (N) or six times weekly (I) physiotherapy follow up programs at a physiotherapy outpatient department.

Results: Exercise capacity, Global HRV measurements and quality of life were improved significantly in group (I) after 3 months physiotherapy follow up and these results were consistently better than group (N) even after one year. A momentous HRV response was seen in angioplasty patients as compared to MI patients when a subgroup analysis was performed at 3 months after intensive physiotherapy follow up.

Conclusion: Intensive physiotherapy follow up programs in cardiac rehabilitation increases exercise capacity, quality of life and global HRV measurements thus reducing the number of deaths due to cardiac complications. These results could have important prognostic significance among cardiac patients in Pakistan.

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