時間增長型與強度增強型運動訓練計劃對心臟衰竭患者成效之比較

Compairson between Duration and Intensity-Increased Exercise Training Programs among Heart Failure Patients

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摘要

本研究目的在比較時間增長型及強度增強型運動訓練計劃對心臟衰竭病患尖峰耗氧量、最大工作負荷量、生活品質的影響,並探討兩種不同運動訓練計劃運動成效之預測變項。以立意取樣法選取台北市某兩家教學醫院,符合選樣條件者共 21 位全程參與運動訓練計劃,其中 10 位被隨機分派至時間增長型運動訓練組, 11 位被隨機分派至強度增強型運動訓練組,以運動測試及問卷兩種方式進行資料收集。資料分析採用平均值、標準差、百分比、卡方檢定、Mann-Whitney test、Wilcoxon Signed Ranks test、Spearmen's correlation、Multiple regression。研究結果顯示:時間增長型及強度增強型運動訓練皆能有效改善心臟衰竭患者之尖峰耗氧量、最大工作負荷量、生活品質。兩組運動訓練成效之比較除強度增強組在最大工作負荷量顯著高於時間增長組外,其他變項皆未達統計上之顯著差異。組別是最大工作負荷量進步的主要預測變項,解釋量達 15%;組別與性別則是生活品質改善的主要預測變項,解釋量達 55%。本研究結果可提供醫療人員設計心臟衰竭患者運動處方時之參考。

Abstract

The purpose of this study was to compare the effects of duration-increased and intensity-increased exercise training programs on peak oxygen consumption (VO2 peak), maximal workload, and quality of life (QOL) for heart failure patients. Factors, which contribute to predict the exercise training outcomes, were determined also. A total of 21 subjects were recurited from two teaching hospitals by purposive sampling and were randomly assigned to either a duration-increased group (n=10) or an intensity-increased group (n=11). Both programs were three times per week for 8 weeks. Data were collected by using questionnairs and treadmill exercise tests and were analyzed by means of Mann-Whitney test, Wilcoxon Signed Ranks test, Spearmen's correlation, and Multiple regression. The results of the study revealed that

the VO2 peak, maximal workload, and QOL improved after 8 weeks exercise training were observed in both groups. However, the improvement in maximal workload was higher in the intensity-increased group than the duration-increased group. Both gender and group variables were significant predictors in improvement of QOL and group variable was a significant predictor in improvement of maximal workload. In conclusions, above two kinds of exercise training programs are beneficial to heart failure patients.