



Service Priorities and Programmes
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Effectiveness of Physiotherapy Management for Patients with Metabolic Syndrome after Bariatric Operation

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Introduction

Metabolic syndrome rose in the population of obesity cases. Patients with metabolic syndrome had high risks to develop heart diseases, stroke and complications.

Literature showed bariatric surgery with proper exercise training were effective and reduced mortality for obesity in metabolic syndrome patients.

Objectives

In this study, the effectiveness of physiotherapy management after bariatric surgery in terms of physical performance and quality of life was evaluated.

Methodology

This was a quasi-experimental study using one-group pre-test post-test design. Bariatric patients were recruited from the Endocrine Clinic of the New Territories West Cluster (NTWC) with body mass index (BMI) about 30 to 40kg/m². Patient received post-operative physical training with exercise guidelines as recommended by the American College of Sport Medicine. All cases received exercise capacity assessment and home exercises protocol (strengthening exercises, abdominal and upper limbs muscle tone-up exercises, and diet monitoring). Six-minute walk test (6MWT), incremental shuttle walk test (ISWT), general health perception and vitality in quality of health questionnaire (SF-36) were assessed pre-operatively and at 3-month post-operation. Non-parametric Wilcoxon Signed Rank test was used to analyze the difference on performance in exercise capacity and quality of life after physiotherapy management.

Result

11 patients (6 males and 5 females) were recruited for bariatric operation from Oct 2009 to Jan 2013. BMI was significantly reduced from 39±4.6 to 33±4.2 (p=0.003) and body weight (BW) was also significantly reduced from 107 kg±13 to 92kg±12.5 (p=0.005) after the bariatric surgery. Exercise capacity as measured by 6MWT and ISWT showed statistically significant improvement. 6MWT increased from 370m±78 to

510m \pm 135, with p=0.005. ISWT increased from 394m \pm 104 to 517m \pm 162, with p=0.009. Average exercise capacity improved from 3.6METs to 4.9METs after three months training. For quality of life, general health perception in SF-36 was improved from 36 \pm 18 to 64 \pm 26, p=0.012. Vitality in SF-36 increased from 56 \pm 10 to 71 \pm 12, p=0.006 after 3 months training. The study provided preliminary data that physiotherapy improved cardiopulmonary fitness in patients who received bariatric surgery. It also ameliorated their vitality and general health perception in the domain of quality of life. Further analysis will be conducted in year 2013 for its long term effects related to the exercise program.