



Service Priorities and Programmes

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Physiotherapy Risk Modification and Lifestyles Redesign Program for Secondary Stroke Prevention – A Two Years Follow-up

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Introduction

Stroke is a leading cause of death and functional disabilities worldwide. People with ischemic strokes and transient ischemic attacks are at high risk of recurrent strokes. The National Stroke Association (USA) stated that the risk for another stroke could increase more than 40% within 5 years of a first stroke. Clinical evidences revealed that management of risk factors through dietary intervention, exercise, anti-platelet and statin therapy is crucial for prevention of recurrent stroke. Sedentary life- style, obesity and activity intolerance are common yet modifiable risks factors. A Secondary Stroke Prevention Physiotherapy Program aiming at reduction of these modifiable risk factors was developed in 2009 in United Christian Hospital; through regular exercise and active life-style for lowering high blood pressure (BP), increasing level of high-density lipoprotein (HDL), controlling body weight and diabetes to help high risk stroke survivors for preventing secondary stroke.

Objectives

To investigate the effectiveness of the program in modifying risk factors of stroke and secondary stroke prevention.

Methodology

Patients with minor ischemic stroke or transient ischemic attacks were referred by acute stroke unit and rehabilitation ward cohort from Mar 2009 to July 2010. A four sessions education and empowerment program was delivered, in which physiotherapy interventions include: (1) identification of risk factors to increase patients' awareness (2) Education on active life-styles through daily exercise and physical activity (3) Exercise prescription and empowerment for establishment of regular exercise habit, weight control and hypertension management were delivered. A 'pre-test' vs 'post-test' design was adopted for the service evaluation. The outcome measures including (1) Lipid profile: HDL & LDL (2) Physical Activity level by Exercise frequency per week and (3) Rate of stroke recurrence were evaluated 2 years post intervention.

Result

From Mar 2009 to July 2010, 79 patients (Male: 36; Female: 43; Mean age: 66.5 years old; Mean BP 141/81; Mean BMI 23.4) with a minor cerebrovascular accident (Transient ischemic attack, TIA: 62; Minor stroke: 17) completed the program. Outcome measures including HDL ($p=0.009$), LDL ($p=0.00$), exercise frequency per week ($p=0.032$) showed significant improvement. Recurrent stroke rate in 2 years was found 15% while the local prevalence was shown 7% at 1 year and 21.2% at 5 years. Conclusion: Active life-style and regular exercise are crucial in stroke prevention. The secondary stroke prevention program was shown effective in reducing risks of recurrent stroke. Multidisciplinary approach with input from nurses and dietitians for a comprehensive stroke prevention management would be valuable in the future.