



Service Priorities and Programmes
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Single session of Whole-body Vibration Therapy increases non-cancer patients' mobility in the Palliative Day Care Unit of Shatin Hospital

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Introduction

Fatigue is one of the common symptoms in non-cancer palliative care patients. Fatigue can cause patients' low participation in exercise training and lead to functional decline. Evidence showed that one session of Whole-body vibration therapy (WBVT) could transiently improve muscle strength of stroke patients. WBVT might be beneficial for non-cancer palliative care patients in improving their muscle strength, as well as mobility. Moreover, WBVT could be delivered without patients' active participation, which may be beneficial for patients with fatigue symptom.

Objectives

This program was to evaluate whether one session of WBVT delivered during physiotherapy treatment could improve mobility, and subjective well-being for non-cancer patients in Palliative Day Care Unit of Shatin Hospital.

Methodology

Subjects were recruited by physiotherapist working in Palliative Day Care Unit. Inclusion criteria included non-cancer patients with stable medical and mental condition, and patients could walk with or without assistance. Exclusion criteria included those contra-indications to WBVT. WBVT equipment used in this program was Turbosonic, a unit with whole plate oscillated vertically up and down. WBVT was applied to patients by physiotherapist. The patient was put in sitting position. The treatment protocol was 30 Hz frequency, 99% intensity and 10 minutes for one session. All patients were assessed before and after WBVT. Mobility level was measured by timed up and go test (TUGT). Subjective well-being was measured by numerical rating scale (NRS) on subjective well-being (0 being the best, and 10 being the worst).

Result

31 patients were recruited in 2012, including 24 patients (77%) with end stage renal failure (ESRF) and 7 patients (23%) with Chronic Obstructive Pulmonary Disease (COPD). TUGT was analyzed by using Wilcoxon Sign-ranked test. The results showed significant difference between pre-WBVT (33 seconds) and post-WBVT (28 seconds) ($p=0.000$). NRS on subjective well-being was analyzed by using paired t-test. The results showed significant difference between pre-WBVT and post-WBVT ($p=0.000$). The mean difference in NRS was 1.7778 (SD 1.18754). In conclusion, one session of WBVT could improve mobility and subjective well-being of ESRF and COPD patients in Palliative Day Care Unit. WBVT can be considered as a good adjunct physiotherapy modality for exercise training of non-cancer palliative care patients, in particular for those patients with fatigue symptoms.