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Explorative Review of the Characteristics of Hip Fracture Patients Potentially Benefit from 7-day Rehabilitation Service

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Introduction

Literature supported extra physiotherapy such as 7-day rehabilitation service model in decreasing hospital stay enhancing clinical outcomes. However, the characteristics of respondent clientele type for the enhanced rehabilitation service rendered further research.

Objectives

The study aimed to explore the characteristics including age, pre-morbid status and pre-admission residence for hip fracture patient likely to benefit from enhanced rehabilitation.

Methodology

A retrospective review of patient transferred to Kowloon Hospital from January 2013 to August 2015, with fracture of proximal femur and surgery, was included. Elderly Mobility Scale (EMS), walking status and residence before admission were assessed. Pearson correlation was conducted to assess the correlation of age to EMS at discharge and the change score of EMS (EMSCS) between admissions and discharge. To analyze difference of training effects, independent sample t-test were used including EMSCS between age groups (younger group: age \leq 80, or senior group: age $>$ 81), EMSCS between different premorbid walking status (independent walker, or assisted and dependent walker) and EMSCS between residence (home or old-age-home)

Result

A total of 336 patients, aged 52 to 102 (mean age 82.8 ± 7.9) were evaluated. The mean EMSCS was 5.1 ± 3.8 (N=336). The results revealed a significant correlation between age and EMS at discharge ($r = -0.411, p < 0.001$) and EMSCS ($r = -0.3, p < 0.001$) thus demonstrating age can be a factor affecting the improvement of functional mobility. There was a significant difference in change in EMS with an increase of 6.4 ± 3.7 in the younger group (N=119) and 4.3 ± 3.7 in the senior

group(N=217)($p < 0.001$); with an increase of 5.5 ± 3.9 in home residence group(N=282) and 2.8 ± 2.8 in old-age-home residence group(N=53) ($p < 0.001$); with an increase of 5.4 ± 3.8 in the independent pre-morbid group(N=299) and 2.6 ± 2.0 in assisted or dependent pre-morbid group(N=30) ($p < 0.001$). There was no significant difference in change in EMS with gender. Subgroup analyses of younger group showed similar results and wider change scores of EMS were found. Systematic review revealed extra physiotherapy to standard 5-day-service decreases length-of-stay, improves mobility and quality-of-life. The current retrospective study revealed characteristics of potential benefitted clientele for 7-day-physiotherapy. The results suggested young with age ≤ 80 , pre-morbid status as independent walker or home residence may be more beneficial for the intensive rehabilitation with better functional mobility improvement.