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Needs Stratification of Hip Fracture Rehabilitation: A Preliminary Review in Two Acute Hospitals

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Introduction

Due to the great service demand of geriatric hip fractures, stratifying patients who are most likely to require rehabilitation would facilitate early transfer of these patients to rehabilitation hospitals and thereby directly decrease length of stay and hospitalization related costs in acute hospitals. Thus clinical efficiency and cost effectiveness of medical care can be achieved.

Objectives

To identify needs stratification on rehabilitation plan in hip fracture patients who undergoing hip surgery

Methodology

Patients who aged 60 years old or above, suffered from hip fracture who required surgery were involved in the study. Subjects in Prince of Wales Hospital (PWH) were recruited between December 2015 and May 2016 while subjects in Alice Ho Miu Ling Nethersole Hospital (AHNH) were recruited between March 2016 and September 2016. At the day of in-patient admission / before operative procedure, occupational therapies would conduct pre-operative assessment which included demographic information, social support, pre-morbid Modified Barthel Index (MBI) (Shah S et al, 1989) and Cantonese Mini-Mental State Examination (MMSE) (Chiu H et al, 1994). Stratification of patients with hip fracture is identified into 3 groups:
Slow stream (poor rehabilitation potential): old age, severe cognitive impairment, poor premorbid ADL functions with limited social support
Normal (a long period of rehabilitation): average cognitive and ADL functions, limited social support
Fast track (a short period of rehabilitation): young age, good cognitive and ADL functions with good social support

Result

Two hundred and three patients were recruited in PWH while fifty patients were recruited in AHNH (n=253). The mean age of the patients was 83.4 years old (61 to 103). Female patients (n=178) were more than male patients (n=75). Based on clinical assessment and judgment, all patients were stratified into fast track (n=36; 14.2%), normal (n=135; 53.4%) and slow stream group (n=82; 32.4%). Statistical analysis showed that 3 groups were clearly stratified in box plot. The mean scores of MMSE were clearly identified 24.9 (SD 4.5), 17.1 (SD 7.4) and 9.6 (SD 6.0) in fast track, normal and slow stream group respectively. On the other hand, the mean scores of MBI were 100 (SD 0), 95.4 (SD 9.7) and 69.6 (SD 22.9) in fast track, normal and slow stream group respectively.

To conclude, the findings of this preliminary review indicated that MBI and MMSE were good stratification tools to guide rehabilitation need so as to facilitate early transfer and discharge plan in acute hospitals.