



Service Priorities and Programmes Electronic Presentations

Convention ID: 512

Submitting author: Miss Jocelyn CHAN

Post title: Physiotherapist I, Kowloon Hospital

Exploring the Validity and Utility of using Modified Barthel Index in Triage of Rehabilitation Services in Patients with Stroke

CHAN JSP(1), CHAU RMW(1), CHEN TMK(1), WONG EYW(1), YEUNG EMP(2), MYINT JWW(2), LAU PMY(3)

(1)Physiotherapy Department, Kowloon Hospital

(2)Department of Rehabilitation, Kowloon Hospital

(3)Physiotherapy Department, Kowloon Central Cluster

Keywords:

Modified Barthel Index

Stroke Rehabilitation

Triage

Introduction

Stroke was one of the major adult disabling conditions worldwide. Modified Barthel Index(MBI) was adopted as triage tool in local hospitals, and yet, there was paucity of local literatures. In Kowloon Hospital(KH), stroke patient with MBI >85(super-fast stream-A) and MBI \geq 41to \leq 85(intensive rehabilitation stream-B) was triaged for active rehabilitation while those with MBI<41(slow stream-C) in medical ward setting for regular rehabilitation program.

Objectives

To explore the validity and utility of adopting MBI as triage-tool in stroke rehabilitation in KH.

Methodology

Patients with stroke admitted to KH from July 2016 to September 2016 were studied. MBI were rated by case-in-charge-Physiotherapist on-admission and at-discharge. To analyze training effects, Wilcoxon Signed Ranks test was conducted to assess the difference of MBI on-admission and at-discharge. Kruskal-Wallis test was applied to determine statistically significant difference($P<0.05$) in change score of MBI and Kendall's tau test for investigation of correlation between MBI and triage grouping.

Result

Data from 83 patients with stroke aged 74.9 ± 13.4 years were analyzed. Fifty-five percent was male and 80% diagnosis of stroke from cerebral infarction and 20% from haemorrhage. 79% patients could walk independently in pre-morbid status and 10% pre-stroke residence was nursing homes. At-discharge, 82% subjects could walk with assistance or walk independently. 69%subjects discharged residence was home. On-admission, 46%sample (N=38;aged 72.3 ± 13.1 years;LOS32 days) in intensive

rehabilitation group and 49% sample (N=41; aged 78.0 ± 13.4 years, LOS 29 days) in slow stream group. 5% sample (N=4, aged 67.3 ± 9.3 years) in super-fast stream. MBI (N=83) improved significantly ($p < 0.001$) at-discharged for all three groups. For intensive rehabilitation group, MBI showed significant improvement with a mean improvement from 60.8 ± 11.8 to 79.7 ± 16.0 (improved from severe to moderate dependency). For slow stream group, MBI showed significant improvement from 14.3 ± 12.7 to 27.9 ± 23.5 ($p < 0.001$). For super-fast stream group, MBI improved from 91.3 ± 3.8 to 98.5 ± 1.0 (improved from moderate to slight dependency). The results of Kruskal-Wallis test revealed a significant difference of the change score of MBI among three groups ($p = 0.013$). Both the discharge ($r = -0.557, p < 0.000$) and the gain in MBI score ($r = -0.259, p < 0.003$) were significantly related to the triage categories. The results revealed that tailor-made stroke physiotherapy program were effective in enhancing clinical outcomes. The results supported using MBI as a user-friendly, time-saving standardized triage tool of no-cost for the stratification of rehabilitation services for the sub-acute stroke patient.