



Service Priorities and Programmes
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Prediction of supervised or independent ambulation after rehabilitation in patients with geriatric hip fracture at TKOH

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Introduction

Geriatric hip fracture is one of the most prevalent fractures in Hong Kong, with more than 4,500 new cases in public hospitals in 2011. It contributes a significant proportion of admissions and hospitalizations which results in high costs for medical care, and affects the functional ability of elderly people and their possibilities for independent living. Early prediction of the ambulatory recovery after hip fracture would help to inform the healthcare team of patient prognosis and possible resources allocation.

Objectives

The study aimed to predict the ambulatory status of geriatric patients with hip fracture using the Functional Prognosis Predictive Scores (FPPS) at pre-operative phase.

Methodology

All geriatric hip fracture patients admitted TKOH from April 2012 to December 2013 and discharged from TKOH or HHH were reviewed. All patients were examined at the time of admission on their preoperative FPPS, pre-morbid and pre-discharge Modified Functional Ambulatory Classification status. Only those patients who could walk with supervision (MFAC \geq 5) pre-morbidly were included for receiver operating characteristic (ROC) curve analysis while patients received conservative management or those had post-operative complications were excluded.

Result

A total of 134 patients, with 78 female (58.2%) and 56 male (41.8%) were recruited. The ROC curve analysis showed that the optimal cut-off score of FPPS was \leq 2 (sensitivity: 71.4%, specificity: 62.4%) and the area under the curve was 0.72 (95%CI 0.63 to 0.79). Assuming 50% chance that patient would achieve MFAC \geq 5 at discharge, the positive predictive value was 65.5% and negative predictive value was 68.6%. These results suggest that an elderly patient with hip fracture and pre-morbid walking with supervision or independently will have a chance of 65% to resume his pre-morbid ambulatory status if the admission FPPS score is \leq 2, while a chance of 68% will not be able to resume his pre-morbid ambulatory status if the admission FPPS score is $>$ 2. The FPPS can be used as a prognostic tool to predict the pre-discharge ambulatory

status of those geriatric hip fracture patients, who can walk with supervision or independently pre-morbidly. It can be used for anticipating early discharge care planning and destination on admission.