Can Preoperative Scoring Systems be Applied to Asian Hip Fracture Populations?
Validation of the Nottingham Hip Fracture Score (NHFS) and Identification of Preoperative Risk Factors in Hip Fractures
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Abstract

Introduction: Hip fractures in the elderly are a major cause of morbidity and mortality. Determining which patients will benefit from hip fracture surgery is crucial to reducing mortality and morbidity. Our objectives are: 1) to define the rate of index admission, 1-month and 1-year mortality in all hip fracture patients, and 2) to apply the Nottingham Hip Fracture Score (NHFS) to determine validity in an Asian population. Materials and Methods: This is a prospective cohort study of 212 patients with hip fractures above 60 years from September 2009 to April 2010 for 1-year. Sociodemographic, prefracture comorbidity and data on functional status was collected on admission, and at intervals after discharge. The main outcome measures were mortality on index admission, 1 month and 12 months after treatment. Results: In our study, the overall mortality at 1-month and 1-year after surgery was 7.3% and 14.6% respectively. Surgically treated hip fracture patients had lower odds ratio (OR) for mortality as compared to conservatively treated ones. The OR was 0.17 during index admission, 0.17 at 1-month, and 0.18 at 12-months after discharge. These were statistically significant. Adjustments for age, gender, and duration to surgery were taken into account. The NHFS was found to be a good predictor of 1-month mortality after surgery. Conclusion: Surgically treated hip fracture patients have a lower OR for mortality than conservatively managed ones even up to 1-year. The NHFS has shown to predict 1-month mortality accurately for surgically treated hip fracture patients, even for our Asian population. It can be used as a tool for clinicians at the individual patient level to communicate risk with patients and help plan care for fracture patients.

Key words: Elderly, Femur neck, Geriatric, Intertrochanteric