A Study of Fall-prediction Factors of Patients with Stroke After Their Discharge from Recovery Rehabilitation Unit: For Those Patients with Stroke Whom Can Independently Walk at Home

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Purpose: The purpose of this study was to identify major risk factors of the falls of the patients with stroke whom live at home by analyzing patients’ information and functional evaluation tools data such as FIM (Functional Independence Measure) instrument and SIAS (Stroke Impairment Assessment Set).

Methods: Sixty-four stroke outpatients who had earlier discharged from Fujita Health University Nanakuri Sanatorium were participated in our study. We evaluated the following baseline characteristics for all patients: age, sex, stroke type, affected side of the body, number of stroke suffered, maximum walking speed, use of ankle foot orthosis, use of cane, use of medicine that may increase the risk of falling, and frequency of the falls of the patient during their rehabilitation period in the hospital, FIM, SIAS, and Mini-Mental State Examination scoring were also done before their discharge from the hospital. We first carried out bivariate analysis to determine which variables differed significantly between the non-fallers and fallers. Those variables of significant statistical values were then included in a multivariate logistic regression analysis. The model was simplified in a Forward Selection Method (Likelihood Ratio) by removing variables.

Results: Those patients with a falling experience comprised 25 patients out of the total 64 patients (39.1%). The logistic model was refined until it excluded all the predictors except two. These two predictors were maximum walking speed, and use of ankle foot orthosis.

Conclusions: Those patients with a slow speed of walking and/or the patients who required the use of ankle foot orthosis were at a higher risk of falling.