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USEFULNESS OF BERG BALANCE SCALE, SIX MINUTE WALK TEST AND TIMED UP AND GO TEST AS FALL RISK PREDICTORS IN POST STROKE ADULTS ATTENDING REHABILITATION HOSPITAL, RAGAMA

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Introduction and objectives: Stroke is a major risk factor for falls. However, there are no established practices for predicting fall risk in Sri Lankan stroke care settings. We sought to determine the usefulness of three clinical tests: Berg Balance Scale (BBS), Six Minute Walk Test (6MWT) and Timed Up and Go test (TUG) as fall risk predictors in post stroke individuals and to introduce cut-off values.

Methods: Participants were recruited from the physiotherapy unit, Rehabilitation Hospital, Ragama. History of falls was recorded from patient's interview. Each participant underwent BBS, 6MWT and TUG test. Scores were compared with international cut-off values. Receiver Operating Characteristic (ROC) curves were constructed to describe sensitivity, specificity and predictive values. Optimum cut-off values for fall risk discrimination were determined.

Results: We studied 74 stroke patients (mean age 56.5 ± 28.5 , males 67.6%) and 17 (23%) had history of falls. There was no significant difference in the baseline characteristics between fallers' and non-fallers. Cut-off values for fall prediction were as follows; BBS < 45, AUC = 0.773, $p=0.001$; 6MWT < 193 meters, AUC = 0.686, $p=0.020$; TUG ≥ 23 s, AUC = 0.662, $p=0.044$.

Conclusion: All three scales were associated with risk of falls. The BBS performed better in predicting fall risk in stroke individuals than TUG and 6MWT. We recommend the use of physical performance tests such as BBS, 6MWT and TUG test to predict fall risk in stroke patients in Sri Lanka.