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SUTIDA PRACHASILCHAI: USE OF BERG BALANCE TEST TO IDENTIFY FALLS IN THAI ELDERLY. THESIS ADVISORS: ROONGTIWA VACHALATHITI, Ph.D. (PHYSIOTHERAPY), SOPA PICHAIYONGWONGDEE, M.Sc. (PHYSIOLOGY). 94 p. ISBN 974-662-365-6

The purpose of this study was to determine the ability of Berg balance test to identify falls in Thai elderly. One hundred elderly subjects were recruited by convenient sampling. Subjects were divided into two groups: faller and nonfaller groups by history of falls. Thirty-eight elderly subjects (10 males and 28 females) were in the faller group and sixty-two elderly subjects (27 males and 35 females) were in the nonfaller group. Subjects completed a questionnaire pertaining to demographic characteristics, hobbies and physical activities, medical history, environmental factors in home, physical activity level and history of falls. Balance performance was measured using Berg balance test. Each subject performed Berg balance test which consisted of 14 items. Sensitivity and specificity of Berg balance test were determined. Age and physical activity level were compared between faller and nonfaller groups.

In this study, the sensitivity and specificity of Berg balance test, at cutoff score of 45, were 61% and 85% respectively. Subjects with history of falls had significantly lower Berg balance score than those without history of falls ($p<0.01$). In comparison of age between faller and nonfaller groups, the result demonstrated no significant difference between groups. Subjects in the nonfaller group had significantly higher physical activity scores than those in the faller group ($p<0.01$). There was association between physical activity level and falling status ($p<0.01$). The number of subjects with low physical activity in the faller group was greater than in the nonfaller group, while the number of subjects with high physical activity in the nonfaller group was greater than in the faller group.

In conclusion, the Berg balance test demonstrated 61% sensitivity and 85% specificity to identify falls. Age had no significant effect on falls, whereas the level of physical activity was associated with falls. The results of this study may suggest that the Berg balance test could be used in clinics to help in early detection of elderly with high risk of fall. This may lead to a reduction of the incidence of falls in the elderly.