Relationship between Timed Up and Go Test and Falls in Greek community-dwelling elderly

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Introduction

Falling is a major health problem and a leading cause of injury and activity limitation in elderly population. Gait instability has been identified as a risk factor for falls and the Timed Up and Go Test (TUGT) has been recommended to assess gait and balance.

Although there have been research data demonstrating the effectiveness of the TUGT for assessing risk of falls, data on the TUGT's value in the Greek population are sparse.

Purpose

To investigate the relationship between a Greek community-dwelling elderly sample's TUGT with the history of falls in Greek community-dwelling elderly.

Participants

An observational cross-sectional study utilizing a convenience sample of 229 elderly individuals was carried out in Achaia and Attiki counties; mainlands of western and central Greece

Methods

A self-administered questionnaire, containing medical history and demographic data was given to all participants. Height and weight were recorded using a standard protocol.

Body mass index was calculated as weight in kilograms divided by height in meters squared. The comprehensive assessment included also TUGT and calf circumference measurement

For the TUGT participants were timed while they stood up from an arm chair (approximate seat height 46 cm), walked at their usual pace to a line on the floor 3 meters away, turned and walked back to the chair and sat down again. Calf circumference was assessed with inelastic tape.

All participants signed an informed consent form prior to their inclusion. Ethics approval: This study was approved by the Ethical Committee of the University of Patras, Greece

Timed Up and Go Test

Results

The sample comprised 229 elderly (160 women and 69 men), with a mean age of 74.3 ± 7.95 years

Table 1.Prticipants characteristics.

Variable	Mean	SD
Age (years)	74.3	7.95
TUG (sec)	9.23	1.96
Calf CC (cm)	34.65	2.46
BMI	27,13	3.33
Comorbidities	2.6	1

The incidence of falls of elderly individuals was 30.1% (n=77). The mean value for TUGT was 9.2±1.96. There were three factors associated with TUGT using regression analyses: falls (OR=2.32; 95 CI 1.9-2.66), age (OR= 0.05 95 CI 0.04-0.07) and comorbidities (OR= 0.32; 95 CI 0.18-0.45). There were no significant associations between TUGT and calf circumference.

Fig.1 Falls prevalence
Non fallers 66.4%
Fallers 30.1%

Discussion and conclusions

The findings of this study demonstrated that the TUGT was positively associated with history of falls, age and comorbidities. Further research with larger sample would be indicated in order to clarify the precise association of specific characteristics of patients with a history of falls.

Recommendations

The present study contributes to the growing field of assessment and rehabilitation among elderly. TUGT is a simple, single-item tool with predictive value for any falls. These findings are important for physiotherapists and other healthcare practitioners in order to select appropriate tools in order to identify patients at risk of falling.

References

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