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A PROSPECTIVE OBSERVATIONAL STUDY OF TIMED UP AND GO TEST IN ELDERLY PARTICIPANTS BELONGING TO VARIOUS AGE GROUPS ATTENDING GERIATRIC OUTPATIENT CLINIC IN MADRAS MEDICAL COLLEGE, CHENNAI.

Medicine

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ABSTRACT

Timed up and Go (TUG) test1 is a simple test to assess the functional status in elderly in outpatient set up. It is the time taken for an elderly to get up from a chair, walk 3 metres and come back. The more time the person takes the more is the functional impairment.

The aim of this study is to apply Timed up and Go (TUG) test in willing elderly participants attending Geriatric outpatient clinic, Madras Medical College, Chennai and compare it among various age category participants.

Materials and Methods, Design: Hospital based prospective Observational study 204 patients were selected and Timed Up and Go test was applied. Sample size was chosen according to our convenience. The age of the participants were noted down.

Results: The mean TUG score in the age group 60-69 years was 13.06 seconds.

The mean TUG score in the age group 70-79 years was 12.69 seconds.

The mean TUG score in the age group >80 years was 15.37 seconds.

Conclusion: There is no statistically significant difference in TUG score between the various age groups (p value 0.061)

KEYWORDS

TUG Score, geriatric, age groups,

INTRODUCTION

Functional status assessment is an important component in Geriatric[2] population. Functional impairment is one among the "Geriatric Giants". Functional status can be viewed as a summary measure of the overall impact of health conditions in the context of a patient's physical and psychosocial environment. Functional impairment is common in elderly[3] and causes are varied – age related physiological and cognitive changes, disuse, disease[4], social factors and interplay between any of these.

Functional status can be measured using variety of tests. Ability to perform basic activities of daily living like transferring, toileting independently can be assessed. Ability to perform advanced activities like managing finances, shopping can also be assessed. To assess all these is time consuming. A simple bed side test to assess the Functional status is Timed Up and Go[5] (TUG) test. In TUG test the patient is asked to sit in a chair without arm rest, get up and walk a distance of 3 metres and come back. Time taken to perform this task is assessed using a stop clock. Time of 12 or more seconds to complete the task indicates impaired functioning in community dwelling older adults. Patient with impairment in Gait and balance may find it difficult to perform the test. Also patient with cognitive impairment will have difficulty to understand the test and perform.

Materials and Methods

Inclusion criteria

Willing participants above 60 years attending Geriatric outpatient clinic, Madras Medical College, Chennai

Exclusion criteria

Functionally dependent elderly, Dementia[6], severe visual and hearing impairment

About 204 elderly patients (100 males and 104 females) attending Geriatric Outpatient clinic in Madras Medical college, Chennai were selected. Sample size was selected according to convenience. After getting approval from institutional ethics committee informed consent were obtained from the patients. The selected participants were subjected to TUG test by trained physiotherapists. TUG[7] test was performed for 3 times in all willing participants and the best of 3 scores was taken Age of the participants was verified with available government records. If not available approximate age was calculated with the age of first child and their age at marriage. Data were documented in MS excel sheet.

Statistical Analysis:

For continuous data such as age, the descriptive statistics n, Mean, SD, Median, IQR, Minimum and Maximum was presented. For categorical data, the number of patients and percentage was presented. Based on the normality of data, the parametric t test was applied to the data. The Anova test was applied to the data. All tests was two-sided at α=0.05 level of significance. All analyses were done using Statistical Package for Social Services (SPSS) software Version 21.0 (Armonk, NY: IBM Corp).

Results

Descriptives

TABLE – 1

Statistics			
TUGSec			
60-69	n	Valid	99
		Missing	0
	Mean		13.06
	Median		11.00
	Std. Deviation		6.363
	Minimum		7
	Maximum		55
	Percentiles	25	10.00
		50	11.00
		75	15.00
70-79	n	Valid	62
		Missing	0
	Mean		12.69
	Median		12.00
	Std. Deviation		4.367
	Minimum		8
	Maximum		28
	Percentiles	25	10.00
		50	12.00
		75	15.00
>80	n	Valid	43
		Missing	0
	Mean		15.37
	Median		13.00
	Std. Deviation		7.410
	Minimum		7
	Maximum		40
	Percentiles	25	10.00
		50	13.00
		75	17.00

Oneway

TABLE – 2

ANOVA					
TUGSec					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	209.311	2	104.656	2.829	P value .061
Within Groups	7436.860	201	36.999		
Total	7646.172	203			

Discussion

Though it was expected that there will be a statistically significant difference in the TUG8 score among the various age groups our study did not show a statistically significant difference in the TUG score among the various age groups.. Further studies with more appropriately sized sample size maybe required to validate this.

CONCLUSIONS

There is no statistically significant difference in TUG score among the geriatric participants between the various age groups (p value 0.061)

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