Archives of Neurology and Neuro Disorders

ISSN: 2638-504X

Volume 3, Issue 2, 2020, PP: 26-29

Role of Elastic Bands in Improvement of Strength and Balance in Geriatric Stroke Patients

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Introduction

As age advances muscle fiber degeneration occurs along with tissues in the body, and there is decline in balance .patients with ischemic stroke have vestibular disturbances. In coordination of step, and parity issues because of weakness in the lower limits are cause of diminished capacity to perform exercises of everyday living (2). unsettling influences while standing and during walk, through a declines in the exercises of day by day living, and an expands the rate of falls(3).

33% of the population ≥ 65 years encounters a fall sooner or later in their on with, the recurrence of falls with age and ≥ 80 years old experience a fall each year(4). This expanded danger of fallings in the older is major quality for functional independency in daily activities of the geriatric population. In this way work out is significant for forestalling falls in the older. Besides home management exercises was found to diminish falls adequately with (5.6).

a systematic pattern of resistance exercises practice utilizing the elastic bands also called as Theraband is easy and portable and conservative. It is commonly utilized for restoration purposes(7).A few examinations have revealed that reinforcing exercise utilizing the Theraband for the lower limbs improves balance capacity. Hence, reinforcing exercise with a Theraband; accordingly, this is an appropriate locally established exercise program for improving the balance in geriatric population. We assessed the impacts of extending and obstruction practices on the static and dynamic parity of who had helpless parity capacity and didn't perform practices consistently.

Methodology

NUMBER OF SUBJECTS: 30, 15 EACH IN ONE GROUP, GROUP A: 15(CONTROL GROUP), GROUP B: 15(EXPERIMENTAL GROUP).

GENDER : only males, AGE GROUP : 60 ABOVE

INCLUSION CRITERIA: ONLY MALE PATIENTS WITH ACUTE ISCHAEMIC STROKE, NO HEAD SURGERY, NO VISUAL IMPAIREMENTS, NO KNEE REPLACEMENTS, NO IMPLANTS, NO VERTIGO, NO ASTHMA. ALL PATIENTS ARE FROM INDIA

Table1. *Included characteristics of the subjects*

	Experimental (n=15)	Control (n=15)
Sex (male)	10.1	8.5
Age (years)	60.5 ± 6.5	65.0 ± 3.4
Height (cm)	165.5 ± 9.8	159.4 ± 7.6
Weight (kg)	55.3 ± 5.0	55.2 ± 5.0

Values are mean ± SD

Patients were informed about the condition and written consent was taken for approval in exercise therapy, patients were distributed into two groups, group A was control group with traditional exercises, stretching, gait training, balance training was suggested, for five sessions in a week, each session was for two hours, continued for five weeks. Group b was experimental group with included elastic bands training, therabands were used as resistance for strength improvement. Theraband was applied in hip flexion to extension in standing, for knee flexion to extension in sitting, hip abduction and adduction in standing.

Balance was measure by The Berg Balance Scale (BBS) both static and dynamic (8,9). The Timed Up and Go Test (TUG) is a straightforward test used to assess portability, which requires both static and dynamic equalization. It quantifies the time a subject takes to ascend from a seat, walk 3 meters, pivot,

stroll back to the seat, and sit down(9). The Tetrax Portable Multiple System (Tetrax Ltd., Ramat Gan, Israel) is a balance assessment gadget that utilizes visual and vestibular input. The Tetrax framework has 2 portable power plates (12 × 30 cm), and postural aggravation is evaluated by the adjustment in weight on 4 focuses from which the steadiness test list and static equalization file are processed.

Results

Results were performed utilizing SPSS form 23.0 programming. The pre-intercession and post-mediation information were analyzed utilizing the matched t-test inside each gathering of subjects, and the autonomous t-test between the gatherings. The degree of centrality was picked chosen as 5% for all statistical analyses.

	Control group A (n=15)		Group B Experimental(n=15)	
	Pre	Post	Pre	Post
TUG (s)	10.9 ± 1.3	01.7 ± 1.2	11.5 ± 1.0	13.4 ± 0.9
BBS (point)	50.1 ± 2.3	50.7 ± 1.9	50.3 ± 2.1	51.8 ± 0.1
EO ST(eye open)	30.6 ± 6.4	25.8 ± 11.3	24.4± 7.4	19.4 ± 6.3
ST(eye close)	35.7± 14.2	38.1 ± 12.6	35.9 ± 11.0	35.8 ± 6.5

Values are mean ± SD, index; ST, stability index

[a]Statistically significant difference between pre-test and post-test ($p<0.05$).

[b]Statistically significant difference between groups ($p<0.05$).

Discussion

This study shows the impacts of elastic bands usage as resistance practice on the static and dynamic equalization of geriatic population who needed exercise and had helpless parity capacity(10, 11)., Balance is generally effected in geriatrics in their late sixties on account of muscle debilitating, sluggish development, expanded weakness messing step up, and utilitarian deformities in balance(12). It can likewise be brought about by diminished strength in lowerlimbs along with coordination, adaptability, or proprioception(13). few studies shown that strength can be improved by utilizing the Thera-band reinforced the lower appendages of older adults(14). Accordingly, this study evaluated the impacts of simple and straightforward extending and resistance practices on the static and dynamic equalization of older grown-ups.

In an assessment of dynamic balance utilizing the TUG, it was accounted for that period >12 s shows a high danger of falling(15,16,). The TUG scores in this investigation were not altogether extraordinary between the gatherings, or among pre-and post-test. In any case, these outcomes disagree with those of a past report that indicated that activity utilizing the Thera band essentially improved the TUG score(17). Our basic program comprising of extending and obstruction practices was not adequate to impact the TUG time, be-reason for the program structure and the absence of time.

The BBS scores were not huge or among pre-and post-test. Accordingly, a solitary extending and obstruction exercise ought to be performed over the long haul or be joined by different schedules so as to effect upgrading the dynamic equalization execution of geriatic population.

An activity program utilizing flexible obstruction improves the static balance of the two appendages while keeping up a typical weight territory . Our outcomes support existing exploration guaranteeing that ordinary preparing and increment of muscle quality upgrade postural control by demonstrating the tangible responses in the anxious system(18). We were viewed as that strong preparing upgraded balance capacity by improving the visual framework and somatosensory faculties.

The dependability test record with eyes open was essentially lower in the obstruction practice bunch than in the benchmark group, and the pre-test esteem was fundamentally higher than the post-test esteem. These outcomes show that opposition practice performed by older grown-ups improved equalization better than extending. Alfieri et al. (19) announced that the focal point of gravity of subjects was kept up after trunk and lower-limit reinforcing works out. Improved dependability while performing obstruction practice in the standing position may cause generally reinforcing.

Our study was restricted by the moderately brief time frame and the utilization of just 1 exercise among the various accessible strategies. Accordingly, these discoveries can't be summed up to every geriatic population. In this way, extra exploration is important to decide the impacts of equalization improvement programs utilizing different charming activities.

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Citation: **Mohammed Sheeba Kauser, Dr. Ali Irani, et al**. *A Review of the Use of Transcranial Magnetic Stimulation in Psychiatric Disorders. Archives of Neurology and Neuro Disorders. 2020; 3(2): 26-29.*