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MOBILITY IMPAIRMENT AMONG PATIENTS WITH PERIPHERAL ARTERIAL DISEASE STAGE 2

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ABSTRACT: The peripheral arterial disease (PAD) in men and women has increased physical disability, decay of function and mortality from coronary diseasing (CVD). Design of the study was descriptive Case series. Sampling technique was non-probability convenience sampling. Functional outcome was assessed using Walking Impairment Questionnaire (WIQ). WIQ form is used to measure functional activity for the individuals with Peripheral Arterial Disease. In a sample size of (N=45), mean age of the population is 2.1556 and standard deviation is .76739. 84.44% of the patients were male and 15.56% patients were female. 6.67% were unable to walk, 22.22% have much difficulty in walking, 24.44% have some difficulty, 15.56% have some difficulty, 31.11% have no difficulty in walking. Peripheral Arterial Disease(PAD)significantly influence the functional performance in the individuals resulting in marked limitations in physical activity.

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INTRODUCTION

Peripheral arterial disease is a gradual occlusion of the peripheral vasculature arteries. 20% of people over the age of 75 are affected. Atherosclerotic symptoms of blood vessels that lead to reduction of natural blood flow to the lower extremity are usually affected by this disease. The number of people impacted by PAD in the world is rising worldwide with about 202 million. The global prevalence of lower extremity peripheral artery disease (PAD) ranges from 3% to 12%. In malnourished patients, PAD was more normal than in patients without malnutrition. The most often reported risk factors were gender and race, hypertension, diabetes, chronic kidney disease and smoking(1).

PAD people have low stamina, slower speed, and poor coordination relative to persons without PAD. PAD is a problem. PAD people may limit their activities in order to prevent leg symptoms (2). However, lower levels of physical activity appear in PADs as compared to individuals without PAD(3). The peripheral arterial disease (PAD) in men and women has increased physical disability, decay of function and mortality from coronary diseasing (CVD). The emphasis on lower extremity, mobility, injury or IADL is the PAD with functional status(4).People with extreme PAD have lower nerve conduction speeds than people with or without mild PAD. Patients with PAD may have impaired gait with constant movement defaults around the ankle joints from the very first stage, especially when flexing foot (plantarflexion)(5).

Increased seriousness of symptomatic PAD will be associated with a reduction in muscle mass, strength and stamina, which will in turn decrease functionality and walking ability in patients with PAD(6). The degree of pathophysiological modifications correlated with ischemia in lower extremity muscles and peripheral nervous in people with PAD lead to functional disability.

The reason for this analysis is to detect the functional dysfunction of patients with peripheral arterial disease, i.e., diminished performance. It offers a means of designing a well-planned, rehabilitation procedure.

METHODOLOGY AND OBJECTIVE

Design of the study was descriptive case series. Sampling technique was non-probability convenience sampling. Duration of study was 6 months after the approval of synopsis. Data was collected from Ghurki Trust Teaching Hospital, Lahore, Sheikh Zayed Hospital Lahore, Punjab Institute of Cardiology Lahore. Objective of this study was to access the functional impairments in peripheral arterial disease patients. In inclusion criteria was comprised of Male/Female patients, above 40 years, patients of Peripheral Arterial Disease, CVD risk factors i.e., hypertension. Exclusion criteria included Amputation, Wheelchair bound patients, Recent Major Surgery, Dementia. 45 patients having Peripheral Arterial Disease was enrolled in the study. Functional outcome was assessed using Walking Impairment Questionnaire (WIQ).WIQ form is used to measure functional activity for the individuals with Peripheral Arterial Disease. The questionnaire contains 20 items and its score ranges from 0 to 100 with higher scores representing less disability. The ICC value of 0.91 has been reported for the Walking Impairment Questionnaire(7). The data was analysed by Statistical Package for Social Sciences (SPSS) version 20.

RESULTS

In a sample size of (N=45), mean age of the population is 2.1556 and standard deviation is .76739. 84.44% of the patients were male and 15.56% patients were female. This interprets that the number of male patients with peripheral arterial disease were higher than the female patients. 51.1% patients were suffering from the peripheral arterial disease from less than 2 years, 31.1% from 2-4 years and 17.8% were from greater than 4 years (Table 1).

6.67% were unable to walk, 22.22% have much difficulty in walking, 24.44% have some difficulty, 15.56% have some difficulty, 31.11% have no difficulty in walking (Fig 1,2). 68.89% of the patients were low performers and 31.11% patients were moderate performers (Fig 3). This interprets that the number of low performers in patients of peripheral arterial disease were greater than moderate performers.

DISCUSSION

Peripheral arterial disease is a complex disease and with progression it affects the multiple systems of the body and results in motor deficits which leads to functional impairments and other complications. Previous studies on PAD patients show reduction in walking speed, step length, stride length, which indicates the patients with PAD walk slowly. The study reported that the overall score of walking impairment questionnaire was lower in patients with peripheral arterial disease as compared to the healthy controls(8).The average age of PAD participants was 74.9 years,47% were women. The average ABI was 0.63.Results shown represent average performance on each measure of lower extremity performance(9).The results of this study were consistent with the previous studies. The duration of peripheral arterial disease in this study was (51.1%) patients were suffering from the peripheral arterial disease from less than 2 years, (31.1%) from 2-4 years and (17.8%) were from greater than 4 years and the mean age of the patients were2.1556. Walking Impairment Questionnaire was used to assess the functional performance of the patients with peripheral arterial disease. Results revealed an impaired functional activity according to the scores of Walking Impairment Questionnaires. 68.89% patients were low performers, whereas 31.11% patients were moderate performers. In a sample size of (n=45) 84.44% of the patients were male and 15.56% patients were females, which indicated that male patients were at greater

risk of functional impairments and associated complications.

CONCLUSION

Peripheral Arterial Disease significantly influence the functional performance in the individuals resulting in marked limitations in physical activity.

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Figure 1: Overall Difficulty in Indoor Walking

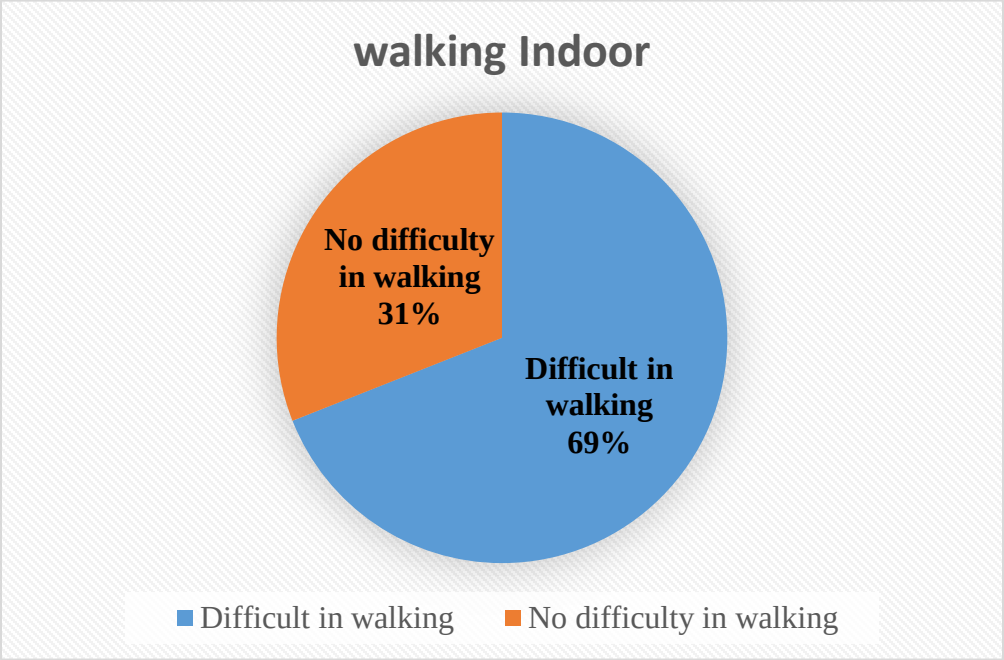

Figure 1: Severity Of Difficulty In Indoor Walking

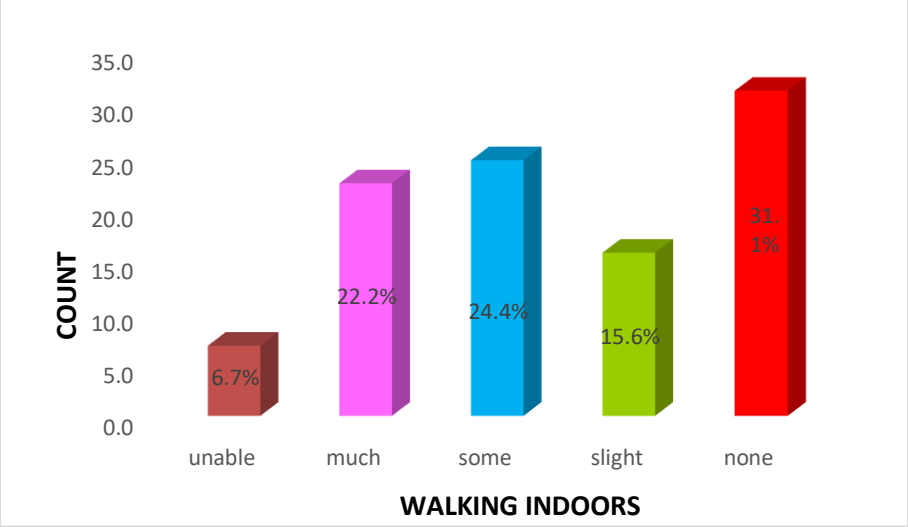

Table 1: Frequency of Duration of symptoms suffering from PAD

Duration of symptoms (years)	Frequency	Percent
<2	23	51.1
2-4	14	31.1
>4	8	17.8
Total	45	100.0

Figure 3:Level of work performance in patients suffering from PAD