Vietnam Journal of Community Medicine, Vol. 65, English version, 2024, 191-196

QUALITY OF LIFE IN STROKE PATIENTS WITH PARALYSIS AT HA TINH REHABILITATION HOSPITAL IN 2024

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Received: 12/10/2024
Revised: 21/11/2024; Accepted: 06/12/2024

ABSTRACT

Background: Stroke is a major health concern globally due to its high mortality and long-term disability impacts, significantly affecting the quality of life of survivors. This study aims to assess the QoL of stroke patients with paralysis at Ha Tinh Rehabilitation Hospital in 2024, focusing on physical, functional, psychological, and social aspects.

Methods: A cross-sectional descriptive study was conducted from April to October 2024 at Ha Tinh Rehabilitation Hospital. Data were collected through interviews using the Stroke-Specific Quality of Life tool. A total of 103 stroke patients with paralysis were included in the study. Descriptive statistics and SPSS version 25.0 were used for data analysis.

Results: The average quality of life score of the patients was 114.83, indicating a moderate level of quality of life. The majority of patients (59.2%) had moderate quality of life, 37.9% had poor quality of life, and only 2.9% reported good quality of life. Physical and functional health scores were relatively low, especially in energy and work/productivity domains, while psychological and social factors also presented challenges.

Conclusion: The study highlights that most stroke patients with paralysis experience moderate to poor quality of life. These results emphasize the need for comprehensive rehabilitation programs that address not only physical recovery but also psychological support and social reintegration, especially in rural areas like Ha Tinh.

Keywords: Stroke, Quality of Life, Paralysis, SS-QOL, Ha Tinh Rehabilitation Hospital.

1. INTRODUCTION

Stroke, also known as cerebrovascular accident, has become an increasingly urgent medical issue over the past few decades, particularly in rehabilitation medicine. Stroke can lead to rapid death or leave severe sequelae, resulting in the highest rate of disability and a significant reduction in quality of life (QoL). According to the World Health Organization, stroke is the second leading cause of death in people over the age of 60 and the primary cause of long-term disability among adults worldwide [1]. Globally, the prevalence of stroke is approximately 13‰, with an incidence rate of 22 per 100,000 people per year [2]. In Vietnam, a study conducted by the Department of Neurology, Hanoi Medical University, revealed that the prevalence of stroke in Northern and Central Vietnam is 75 per 100,000, with an incidence rate of 53 per 100,000 people [3]. The focus of stroke treatment is not only to extend life expectancy but also to improve patients' quality of life. Therefore, in addition to physical rehabilitation, attention to the patient's mental well-being is essential.

Ha Tinh is a small province in the North Central region of Vietnam, and the Ha Tinh Rehabilitation Hospital has effectively treated motor impairments caused by stroke. The hospital combines modern medicine with traditional Vietnamese medicine, including physical therapy and non-pharmacological methods, to help patients recover both physically and mentally. However, the quality of life of stroke patients after discharge remains a significant concern, as no studies have yet addressed this issue at the hospital. Patients who survive strokes often experience lasting physical impairments, which significantly affect their quality of life as they reintegrate into family and community life. This study aims to describe the quality of life of stroke patients with paralysis at Ha Tinh Rehabilitation Hospital in 2024, focusing on their physical, functional, psychological, and social well-being.

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2. MATERIALS AND METHODS

2.1. Study design

A cross-sectional descriptive study was conducted from April to October 2024 at Ha Tinh Rehabilitation Hospital.

2.2. Study subjects

The study subjects were stroke patients with paralysis who were receiving inpatient treatment in the specialized wards of Ha Tinh Rehabilitation Hospital.

Inclusion criteria: Patients aged 18 years and older and voluntarily agreed to participate in the study. Patients who were alert and able to communicate (if they could not speak, they could communicate through gestures), and capable of understanding and answering interview questions in Vietnamese.

Exclusion criteria: Patients with limited communication ability, such as those with hearing loss, dementia, or in a coma; Patients with comorbidities (e.g., chronic kidney disease requiring dialysis, rheumatoid arthritis, cancer, or myocardial infarction) or those in critical condition who could not participate; Pregnant women.

2.3. Data collection

Data were collected through direct interviews using a structured questionnaire. Each patient was interviewed once, one day before their hospital discharge. Each ward's administrative department informed the research team about patients scheduled for discharge the following day. The interviewer collected personal and clinical information from the patient's medical records before conducting the interview.

2.4. Study tool

The data collection tool was a structured questionnaire consisting of personal and clinical information, as well as questions about the patients' quality of life (QoL). The Stroke Specific Quality of Life (SS-QOL) scale was used to assess the quality of life of stroke patients [4]. This questionnaire, originally developed by Nguyen Tan Dung, was adapted for this study with slight modifications in wording [5]. The SS-QOL measures 12 domains: energy, language, vision, thinking, mobility, self-care, upper extremity function, work/productivity, mood, personality, family role, and social role.

2.5. Variables and Indicators

Personal and clinical variables included age, gender, residence, education level, occupation, economic status, BMI, side of paralysis, number of strokes, and hospital stay duration. The variables describing the QoL of stroke patients with paralysis, based on the SS-QOL scale, include factors grouped into physical health, functional health, psychological factors, and family and social factors.

The SS-QOL consists of 49 questions, each rated on a 5-point scale. The total QoL score is calculated by summing the responses. Three levels of QoL assessment: Poor QoL: 49-98 points; Moderate QoL: 99-195 points; Good QoL: 196-240 points..

2.6. Data Analysis

Quantitative data were cleaned and entered into a computer using Excel software and analyzed with SPSS version 25.0. Descriptive statistics such as percentage and frequency were used for categorical variables, and mean, standard deviation, maximum, and minimum values were calculated for continuous variables.

2.7. Ethical Considerations

The study was approved by the Board of Directors and the Scientific Committee of Ha Tinh Rehabilitation Hospital. Patients were informed about the study's objectives and procedures and were only interviewed after giving their informed consent. All personal information was kept confidential and used solely for research purposes.

3. RESULTS

Through data collection on 103 patients with paralysis due to cerebrovascular accident who were treated and discharged during the study period at Ha Tinh Rehabilitation Hospital, we obtained the following results:

Table 1. Sociodemographic variables of the participants (n=103)

Variables		n	%
Age group (years)	18-35	1	1.0
	35-60	35	34.0
	≥ 60	67	65.0
Gender	Female	38	36.9
	Male	65	63.1
Residence	Urban areas	27	26.2
	Suburb areas	76	73.8
Occupation	Mental labor	21	20.4
	Manual labor	71	68.9
	Others	11	10.7
Education	Primary school	29	28.2
	Secondary school	49	47.6
	High school	18	17.5
	College/university and above level	7	6.8
Marital status	Married	83	80.6
	Not married	5	4.9
	Widowed/Divorced	15	14.6

Among the 103 patients in this study, 65% were over 60 years old, while 35% were under 60. The number of male patients was higher, accounting for 63.1% compared to 36.9% female. Patients residing in urban areas made up 26.2% of the total.

Regarding education level, the majority of patients had completed middle school (47.6%), while only 6.8% had a college or university education. A significant proportion (68.9%) of the patients were manual laborers. In terms of marital status, 80.6% of patients were currently living with their spouse.

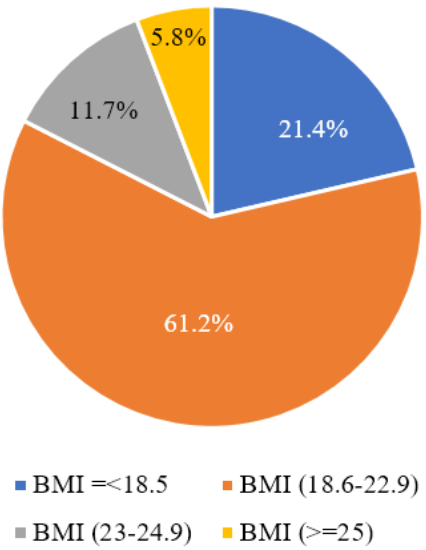

Figure 1. BMI index of participants (n=103)

Most of the participants in the study had a normal BMI, accounting for 61.2%. Overweight individuals made up 11.7%, obese individuals accounted for 5.8%, and 21.4% of the participants were underweight.

Table 2. Clinical Characteristics of participants (n=103)

Variables		n	%
Paralysis side	Right	39	37.9
	Left	52	50.5
	Both	12	11.7
Daily activity function	Independent	28	27.2
	Dependence in part	35	34.0
	Total Dependence	40	38.8
Length of stay	Over 1 month	68	66.0
	≤ 1 month	35	34.0
History of stroke	No	70	68.0
	Yes	33	32.0
Number of hospitalization times	1-2 times	35	34.0
	Over 2 times	68	66.0

Of the participants, 50.5% had left-sided paralysis, 37.9% had right-sided paralysis, and 11.7% had bilateral paralysis. Most participants were dependent on their daily activities, with a notable proportion being completely dependent (38.8%), while 34% were partially dependent. Only a small percentage (27.2%) were fully independent in their daily activities.

The majority of participants had hospital stays of over one month (66%), and 66% had been admitted to the hospital more than twice. Additionally, 68% of the participants had experienced their first stroke.

Table 3. Average scores of health domains and overall quality of life scores of stroke patients after treatment according to SS-QOL (n=103)

Health domains		Mean score	SD
Physical Health	Energy	5.85	1.92
	Language	9.37	3.07
	Vision	15.69	6.70
	Thinking	8.74	2.79
	Total	39.65 ± 11.32	
Functional Health	Mobility	11.42	5.40
	Self-Care	10.07	5.80
	Upper extremity function	9.63	5.70
	Work/Productivity	4.86	2.35
	Total	35.98 ± 17.32	
Psychological Factors	Mood	14.28	4.67
	Personality	9.66	2.79
	Total	23.94 ± 6.58	
Family and Society	Family roles	5.62	2.45
	Society roles	9.63	4.22
	Total	15.25 ± 5.86	
Total quality of life score		114.83 ± 34.81	

In the physical health domain, the lowest average score was for energy at 5.85 ± 1.92, while the highest score was for vision at 15.69 ± 6.7. In the functional health domain, the highest average score was for mobility at 11.42 ± 5.4, whereas the lowest score was for work/productivity at 4.86 ± 2.35. For psychological factors, the mood domain had an average score of 14.28 ± 4.67, while personality had a lower average score of 9.66 ± 2.79.

The study results showed that the highest overall average score was for physical health at 39.65 ± 11.32, followed by functional health at 35.98 ± 17.32. The average score for psychological factors was 23.94 ± 6.58, with the lowest score being in the family and social factors domain at 15.25 ± 5.86. The total quality of life score, according to the SS-QOL, for the 103 patients after treatment was 114.83 ± 34.81.

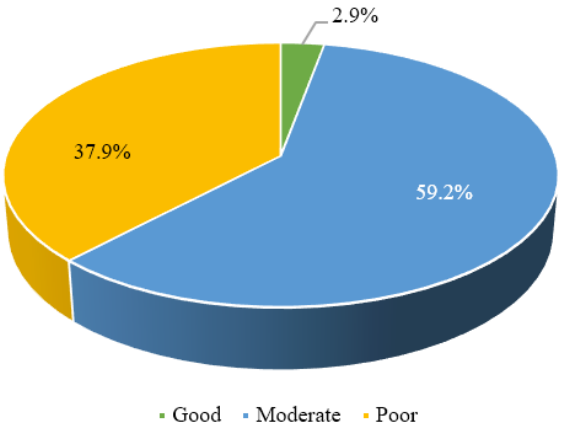

Figure 2. Classification of quality of life of patients with paralysis after stroke according to SS-QoL (n=103)

Out of the 103 participants in the study, the majority of patients had a moderate QoL (59.2%), while 37.9% had poor QoL, and only 3 patients (2.9%) reported good QoL.

4. DISCUSSION

Stroke is a condition that can affect people of all ages, but its incidence increases with age. It is rare before the age of 40 and most commonly occurs after the age of 65. Our study found that 65% of stroke patients were over 60 years old, which is consistent with other research findings [6], [7], [8]. Additionally, men accounted for 63.1% of stroke patients, several studies have attributed the higher incidence of stroke in men to lifestyle factors such as alcohol and tobacco use [9], [10].

In this study, the educational levels of the participants showed that a significant proportion had only completed middle school (47.6%) or elementary school (28.2%), while only a small percentage (6.8%) had attained a college or university education. These findings are consistent with the results of a study by Nguyen Quang Khiem, which reported that 35.2% of participants had completed middle school and 31.4% had completed elementary school [11]. The authors of that study explained that, on average, 60 years ago, during the period of national war and hardship, living conditions were extremely difficult, making it challenging for individuals to access education. Moreover, there is a clear correlation between educational level and occupation. Participants with lower education levels were less likely to work in office jobs or hold positions as civil servants. This study found that the majority of patients coming to the hospital for treatment were married (80.6%), a finding that is consistent with previous research [12], [13], [14]. For instance, in Vu Thi Thu Ha's study, 83.9% of stroke patients were married [14].

Clinically, 50.5% of patients had left-sided paralysis, which aligns with previous studies indicating that left-sided hemiplegia is more common than right-sided hemiplegia. However, in community-based studies such as those by Nguyen Tan Dung, the proportion of patients with right-sided paralysis tends to be higher, which may be due to differences in sample populations [5]. Our study also revealed that 66% of patients had been hospitalized for over a month, and 68% were experiencing their first stroke, which indicates a lengthy recovery process for many of these patients.

The results showed that most of the participants had a normal BMI (61.2%). However, 21.4% of the patients were underweight, 11.7% were classified as overweight, and 5.8% were obese. The high percentage of underweight patients could be attributed to the chronic nature of their illness, age-related factors, or prolonged hospitalization, which might have affected their nutritional status. Conversely, the presence of overweight and obese patients, though lower in number, highlights the importance of addressing nutritional management in stroke rehabilitation, as obesity is a known risk factor for stroke recurrence. Thus, maintaining an appropriate BMI should be a key focus in the rehabilitation process to improve recovery outcomes and overall quality of life for stroke patients.

Since stroke is a chronic condition, patients often experience significant loss or limitations in functional health. In our study, only 27.2% of patients were fully independent in their daily activities at the time of discharge. About one-third of the 103 patients were partially dependent, and 38.8% were completely dependent on others for daily activities. Compared to previous studies, the rate of complete independence in our study is much lower than that reported by Kotila (68%) [15], Nguyen Tan Dung (58.4%) [5], and Dao Viet Phuong (90.34%) [16]. The lower rate of independence in our study may be due to the small sample size and the shorter duration of the study.

The quality of life (QoL) scores, as measured by the Stroke-Specific Quality of Life (SS-QOL) scale, showed that the overall quality of life of stroke patients was moderate, with an average score of 114.83 ± 34.81. This is consistent with previous studies, such as those by Nguyen Tan Dung and Vu Thi Thu Ha, who reported similar findings [5], [14].

The physical health domain scored the highest, particularly in the vision category, which was the least affected by stroke. However, the energy domain had the lowest score, reflecting the fatigue and physical weakness experienced by many stroke patients. In terms of functional health, mobility had the highest score, indicating some degree of physical recovery in patients, while work/productivity had the lowest score. This suggests that although patients may regain some physical abilities, their capacity to return to work or engage in productive activities remains significantly impaired. These findings are in line with other

studies, which have noted that stroke patients often struggle with functional recovery, particularly in terms of resuming their previous work roles [10], [17].

Psychological factors, such as mood and personality, also played a crucial role in the patients' QoL. The mood domain scored relatively high, but patients still exhibited signs of psychological distress, which could affect their overall recovery. The social and family roles had the lowest scores (15.25), indicating that stroke patients face significant challenges in reintegrating into their family and social environments after a stroke. This is consistent with studies by Sjogren and colleagues, who found that depression and social isolation are major factors that negatively affect the QoL in stroke patients [9].

Overall, our study found that the majority of stroke patients had a moderate QoL (59.2%), while 37.9% had a poor QoL. Only 2.9% of patients reported a good QoL, which underscores the significant impact of stroke on various aspects of life. Our results differ from those of some other studies, as the proportion of patients with good QoL in our study is very low [6], [18]. However, the findings are consistent with the results of Dao Viet Phuong and Do Kim Chi, where the majority of patients had a moderate QoL [16]. This could be explained by the severity of stroke sequelae in our study population. Additionally, the study was conducted in Ha Tinh, a predominantly agricultural province with relatively low living standards. In this context, quality of life, both for stroke patients and the general population, is not a primary concern, which may account for the high proportion of patients with moderate to poor QoL. These findings suggest that more attention should be given to the emotional and social well-being of stroke patients in addition to physical rehabilitation. Comprehensive interventions involving family support, psychological counseling, and social reintegration programs are crucial to improving the QoL of stroke patients.

This study provides valuable insights into a specific population in a rural area of Vietnam, where research on the QoL of stroke patients is limited, making this one of the few studies addressing this issue in such a setting. However, the study has several limitations. First, the cross-sectional design only captures a snapshot of patients' QoL at one point in time, limiting our understanding of how their QoL evolves over the long term. A longitudinal study would provide more detailed insights into changes over time. Second, the sample size was relatively small, and the study was conducted in a single hospital, which may limit the generalizability of the results to other regions or hospitals. Finally, although the SS-QoL tool was adapted for Vietnamese patients, cultural differences or individual interpretations of the questions may affect the accuracy of the data, particularly in the psychological and social domains.

5. CONCLUSIONS

The quality of life of stroke patients with paralysis treated at Ha Tinh Rehabilitation Hospital had an average score of 114.83. The majority of patients (59.2%) experienced a moderate QoL, while a significant portion (37.9%) had poor QoL, and only a small percentage (2.9%) reported good QoL. These findings highlight the need for comprehensive interventions that address not only physical rehabilitation but also psychological support, social reintegration, and improvements in living standards. Further efforts should be made to enhance the QoL for stroke patients by providing holistic care and support systems, especially in underserved areas.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

ACKNOWLEDGMENTS

The data for this article came from stroke patients with paralysis treated at Ha Tinh Rehabilitation Hospital. We thank all the participants and healthcare staffs for their support.

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