

QUALITY OF LIFE IN POST - STROKE DEPRESSIVE OLDER PATIENTS

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Information on assessing health - related quality of life is lacking, especially in post - stroke depressive elderly patients (PSD). To investigate the quality of life in post - stroke depressive elderly patients, a cross - sectional study was conducted at the National Geriatric Hospital. Patients with stroke aged 60 years or above were recruited. Post - stroke duration was more than 2 weeks. The Quality of life was evaluated using the European Quality of life - 5 Dimensions - 5 Level scale (EQ - 5D - 5L) and EQ VAS. Demographic characteristics, stroke characteristics, severity of depression using GDS - 15 were assessed by using self - administered questionnaire. In ten months, a total number of 154 post - stroke elderly patients with depression was admitted to National Geriatric Hospital. Quality of life among PSD patients was mainly at severe or extreme problems accounting for 71.4%. The higher the severity of depression, the lower the EQ - VAS score ($p < 0.01$). The problems of 5 dimensions of quality of life were more common in post - stroke depressive patients with aged > 75 years. There was a significant difficulty at severe and extreme level in 5 dimensions of quality of life in post - stroke depressive elderly patients. The quality of life was significant poor in post - stroke patients with severe depression and advanced age.

Keywords: Quality of life, Post - stroke depression, Older patients.

I. INTRODUCTION

Depression has been considered the most common neuropsychiatric comorbidity associated with stroke, influencing healthcare use, functional outcomes, quality of life and mortality in stroke patients.¹ Depressive disorders may occur after stroke onset or within the next few months of stroke recovery. Studies reported that prevalence of post - stroke depression (PSD) varied from 10% to 64% depending on time evaluation, study method, diagnostic and selective criteria.²⁻⁴ PSD patients could experience on - going sadness, loss of interest or pleasure, decreased energy, feelings of guilt or low self - worth, disturbed sleep or appetite and poor concentration which

combined with the elderly health issues.

In treatment and caring for post stroke depression elderly patients, routine assessment for elderly health issues should be included.⁵ Systematic screening for depression after stroke with the Geriatric Depression Scale - 15 (GDS - 15) is highly recommended as reliable and valid for Comprehensive Geriatric Assessment. EQ - 5D - 5L and EQ - VAS are standardized valuation to assess quality of life in several countries especially in elderly population as a genetic health status measurement. Though depression is consolidated as the main psychological issue related to quality of life and stroke in the world, limited information is available in Vietnam, especially in elderly patients with PSD. Therefore, we conducted this study to assess the quality of life in post stroke elderly patients measured by the EQ - 5D - 5L and EQ - VAS.

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II. SUBJECTS AND METHODS

1. Study population

Post - stroke patients 60 years and older were being treated at the National Geriatric Hospital. Inclusion criteria: (1) Patients of 60 years and older diagnosed for stroke based on computed tomography scan in the acute phase and the post - stroke duration was more than 2 weeks (2) Had the physical and cognitive abilities to do a face - to - face interview. Exclusion criteria were: (1) Patient diagnosed with Transient ischemic attack (TIA) or suffered from brain trauma before this time (2) Patient had severe condition like respiratory failure, using ventilator (3) Patient had medical history of psychosis (severe dementia, depression, bipolar emotional disorder, schizophrenia, substance addiction) before got stroke (4) Patient with the inability to communicate (5) Subjects who could not undergo the cognitive test, because of severe aphasia or dysphasia or dysarthria, deafness, or visual impairment.

2. Study design and setting

A cross - sectional study was conducted at the National Geriatric Hospital in about 10 months (February 12th to October 22nd, 2019).

3. Tools and data collection method

Assessment of Depression

The Geriatric Depression Scale - 15 (GDS - 15) is used extensively in clinical and research settings to assess depression in the elderly.6 Evaluation results: GDS - 15 is a 15 - points questionnaire with cut - off point is 4 points by answering "yes" or "no" questions: No depression (0 - 4 points); Mild depression (5 - 8 points); Moderate depression (9 - 11 points); Severe depression (12 - 15 points).

Assessment of Quality of life

The European Quality of life - 5 Dimensions - 5 Level scale (EQ - 5D - 5L) Questionnaire

is ideally suited for use in postal surveys, in clinics and face - to - face interviews by 3 trained researchers to evaluate quality of life in the general population as well as the elderly population with supplementary measurements to capture all related aspects in their quality of life (only take 5 - 10 minutes). It has two components: EQ - 5D - 5L descriptive system and the EQ visual analogue scale (EQ - VAS).

The descriptive system comprises of 5 dimensions, including Mobility, Self - care, Usual activities, Pain/discomfort and Anxiety/depression.

Each dimension has 5 levels, each point is calculated as follows "1 = extreme problems", "2 = severe problems", "3 = moderate problems", "4 = mild problems" and "5 = no problems".

The EQ visual analogue scale (EQ - VAS) records the patient's self - rated health status of the interviewed day on a 20 cm vertical analogue scale ranged with 2 endpoints "0 = The worst health you can imagine" and "100 = The best health you can imagine". This method is useful and simple for valuing HRQoL weights.

Stroke characteristics

+ Recurrent stroke: yes/no

+ Stroke type: Patient was diagnosed with ischemic stroke or hemorrhagic stroke. Ischemic stroke is caused by interruption of the blood supply to a part of the brain resulting in sudden loss of function, while hemorrhagic stroke is attributed to rupture of a blood vessel or an abnormal vascular structure.

+ Post - stroke duration: Post - stroke duration is the period when the first symptoms of stroke began to the time patient was evaluated: 2 to 4 weeks and > 4 weeks.

+ Location of brainstem lesions: The patient was diagnosed with stroke and the location of lesion was based on the result of clinical and subclinical. The location was defined as Right

and Left hemispheric.

4. Statistical analysis

Data processing was done by using SPSS software (version 22). The descriptive statistics were used: frequency, percentage, mean. Inferential statistics was done to perform comparisons between groups, using χ^2 . Statistical significance was the 95% confidence

level ($p < 0.05$).

5. Ethical issues

All data collected was used for research. The results of the study were proposed for improving health of community, not for other purposes and all ethical issues in biological research were ensured.

III. RESULTS

154 stroke patients with depression were recruited in the study. Average age of the PSD patients was 72.68 ± 8.88 years. Patients over 75 years old represented 37% in the total number of the sample. Ratio of male/female was 1.48. (Table 1)

Table 1. Characteristics of stroke among participants (n = 154)

Characteristics	Post - stroke patients with depression N (%)
Recurrent stroke	
Yes	45 (29.2)
No	109 (70.8)
Stroke duration (weeks)	
2 - 4	125 (81.2)
> 4	29 (18.8)
Location of brainstem lesions	
Right hemispheric	64 (41.6)
Left hemispheric	90 (58.4)

About 71% patients experienced first stroke. There were 125 subjects (81.2%) interviewed within 2 - 4 weeks after stroke. Two thirds of study population were diagnosed as ischemic stroke (67.5%) and left hemispheric stroke (58.4%). (Table 1)

EQ - VAS mean score was 52.12 ± 16.07 , the higher the severity of depression, the lower the EQ - VAS score ($p < 0.01$). Total score of patients with mild and severe depression was 52.84 ± 13.66 , and 38.76 ± 15.36 , respectively. (Table 2)

Table 2. Quality of life of post - stroke depressive patients according to severity of depression using EQ - VAS

SeveRity of depression	Mild (n = 64)	Moderate (n = 51)	Severe (n = 39)
EQ - VAS	52.84 ± 13.66	49.05 ± 15.23	38.76 ± 15.36

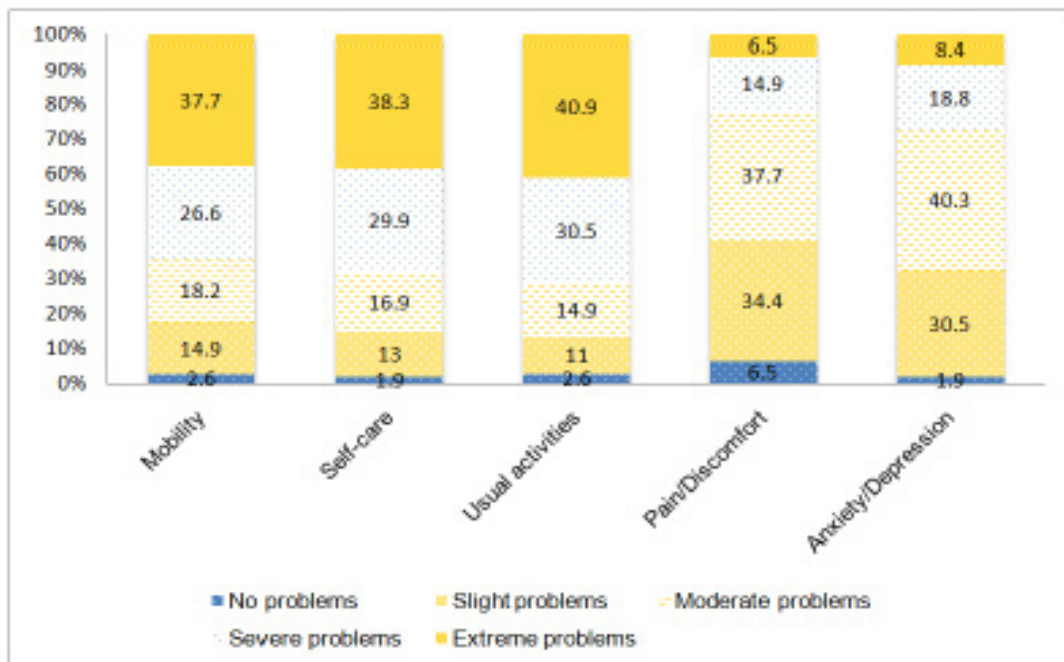


Figure 1. Quality of life among participants using EQ - 5D - 5L (N = 154)

The result of data analysis revealed statistically significant differences in the perception of HRQoL between age groups. Increasing age related to high frequency of reporting difficulty in daily life, e.g. self - care and pain. By age, the self - care problem was 100% in patients over 75 years. (Table 3)

Table 3. Quality of life of post - stroke depressive patients according to age groups

EQ - 5D DIMENSION	60 - 74 years		≥ 75 years		P value	
	N	%	N	%		
Mobility	No problems	3	3.1	1	1.8	> 0.05
	Problems	94	96.9	56	98.2	
Self - care	No problems	3	3.1	0	0	< 0.01
	Problems	94	96.9	57	100	
Usual activities	No problems	3	3.1	1	1.8	> 0.05
	Problems	94	96.9	56	98.2	
Pain/ discomfort	No problems	8	8.2	2	3.5	< 0.05
	Problems	98	91.8	55	96.5	
Anxiety depression	No problems	2	2.1	1	1.8	> 0.05
	Problems	95	97.9	56	98.2	
VAS Score		48.93 ± 16.06		46.49 ± 14.80		> 0.05

IV. DISCUSSION

The result shows that there is no significant difference between the type of stroke and the quality of life. Hackett et al. (2005) found that patients with hemorrhagic stroke have better quality of life compared to patients with ischemic stroke.⁶ The result shows that there is no significant difference between brain lesion and quality of life. Hopman and Verner (2003) found that brain lesion had little impact on the quality of life because the patients show significant difference in role - physical functioning when they are in acute stage but there are no difference once they are in chronic phase.⁷

The result in quality of life of post - stroke depression showed 97.4% patients having difficulty in mobility. The prevalence in mobility of participants was extremely high due to consequence after stroke. 97.4% patients cannot perform usual activities (mild to extreme problems) due to mobility limitation. There are multifunction decline combined with PSD, depressive disorders resulting in pessimism, activities avoidance, low mood which negatively affect the quality of life. Sequelae and disability directly affect functional ability. 93.5% patients had pain/discomfort. Pain/Discomfort is a subjective reaction. Everyone has different pain threshold and this condition affect the quality of life. 98.1% patients had anxiety/depression. Our result was significantly higher than other previous researches. The reason may be related to the difference in the level of anxiety/depression, living condition and circumstance. Moreover, 62.2% was male, extended family was common in Vietnam, male was under a lot of pressure as a breadwinner. On the other hand, suffering from current low health condition, dependence in activity of daily living, for example brushing, washing, dressing, was

inevitable.

By age, the problem in self - care was 100% in patients over 75 years and there was significantly difference in pain/discomfort between patients 60 - 74 years and over 74 years. This can be explained that as they are getting older, the patients have to face with cognitive and functional impairment especially in post - stroke elderly patients with permanent sequelae that have a huge impact on self - care problems. Additionally, there was significantly difference between male and female at anxiety/depression dimension; 100% female had problems with anxiety/depression. It might be caused by the difference in social life as well as biological difference between male and female. Female tend to overthink and overwhelm about social pressure that makes stress status worse.

V. CONCLUSION

There was a significant difficulty at severe and extreme level in 5 dimensions of quality of life in post - stroke depressive elderly patients. The quality of life was significant poor in post - stroke patients with severe depression and advanced age.

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