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Original Article

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Quality of life of patients affected by cerebral vascular accident

Qualidade de vida de pacientes acometidos por acidente vascular cerebral

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Abstract
Stroke is a serious disease, its sequelae can compromise the quality of life of the people affected. Objective: To analyze the quality of life of stroke patients. Methodology: This is a descriptive, exploratory cross-sectional study, with a sample composed of stroke patients of both sexes, aged over 21 years. The questionnaires were applied: Mini-Mental State Examination (MMSE), Sociodemographic and the Medical Outcomes Short-Form 36-item Health Survey (SF-36). Results: 20 patients were in attendance, only 15 of them reached the required MMSE to enter the research. 9 (60.0%) were male and 6 (40.0%) were female, aged over 60 years, aged from 60 to 69 years 6 (40.0%) and 71 to 79 years 2 (13.3%), in relation to race, white and brown were equal to 7 (46.7%), for the type of stroke it was observed that 11 (73.3%) of the patients suffered a stroke Ischemic and 4 (26.7%) Hemorrhagic Stroke. About the time of the stroke, 12 (80%) had had it for more than 1 year. Low scores were observed in all domains of the SF-36, mainly in the natural aspects (26.66), functional capacity (43.33), and emotional aspects (41.93). Conclusion: It was observed a compromise in the perception of Quality of Life (QOL) with low values in all domains, mainly in the physical, emotional and functional capacity, with a higher frequency in patients with a clinical diagnosis of ischemic stroke, aged over 60 years of male gender.
Palavras-chave: Stroke. Quality of life. Risk factors..

Resumo
O Acidente Vascular Cerebral (AVC) é uma doença grave, suas sequelas podem comprometer a qualidade de vida das pessoas acometidas. Objetivo: Analisar a qualidade de vida de pacientes acometidos por AVC. Metodologia: Trata-se de um estudo descritivo,

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exploratório do tipo transversal, com amostra composta por pacientes acometidos por AVC de ambos os sexos, com idade acima de 21 anos. Foram aplicados os questionários: Mini-Exame do estado mental (MEEM), Sociodemográfico e o *Medical Outcomes Short-Form 36-item Health Survey* (SF-36). Resultados: 20 pacientes estavam em atendimento, desses apenas 15 atingiram a pontuação necessária no MEEM para entrar na pesquisa. 9 (60,0%) eram do sexo masculino e 6 (40,0%) do sexo feminino, com idade igual ou superior a 60 anos, com faixas etárias de 60 a 69 anos 6 (40,0%) e 71 a 79 anos 2 (13,3%), em relação à raça, a branca e a parda se igualaram com 7 (46,7%), ao tipo de AVC observou-se que 11 (73,3%) dos pacientes sofreram AVC Isquêmico e 4 (26,7%) AVC Hemorrágico. Sobre o tempo de ocorrido do AVC, 12 (80%) tinham tido há mais de 1 ano. Foram observados baixos escores em todos os domínios da SF-36, principalmente nos aspectos físicos (26,66), capacidade funcional (43,33), e aspectos emocionais (41,93). Conclusão: Foi observado o comprometimento na percepção da Qualidade de Vida (QV) com valores baixos de todos os domínios, principalmente nos aspectos físicos, emocionais e capacidade funcional, com maior frequência em pacientes com diagnóstico clínico de AVC do tipo isquêmico, com igual ou superior a 60 anos de gênero masculino.
Keywords: Acidente Vascular Cerebral. Qualidade de vida. Fatores de Risco.

Introduction

Stroke is changed to an interruption of blood flow, or leakage of fluid into the brain, which can result in death due to a vascular problem, causing infarction or hemorrhage of the neural tissue, as a consequence of deficits in neurological functions[1].

In its etiology, stroke is classified in two ways: Hemorrhagic, which results from an extravasation of blood reaching the structures of the central nervous system. While the Ischemic; it is due to the obstruction of vessels, limiting the supply of oxygen and substrates to the brain tissue[2].

Worldwide, the disease in question presented high rates of disability and morbidity and mortality, being considered a public health problem and the second leading cause of death in the world. According to the World Health Organization (WHO, 2013), it is estimated that by 2030 stroke remains the second leading cause of death, affecting about 15 million people a year and about 5 million deaths[3]. No In Brazil, stroke is considered a serious disease, with a survival rate of 47%, being considered a public health problem for generating disability and, in most cases, loss of independence, which directly affects Quality of Life (QL)[4].

According to the WHO[5], QL refers to "the individual's perception of their insertion in life, in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns". Therefore, everything that encompasses their physical and psychological health, as well as changes in the individual, social and cultural context in which this individual lives and who is exposed can interfere with their QL.

In this perspective, individuals affected by stroke have difficulties in carrying out their

Activities of Daily Living (ADL's), starting to depend partially or totally on the help of family members or caregivers. In addition, this new reality can trigger stress, anxiety, or depressive conditions due to the limitations imposed by the disease that affect family and social life, as the domains of QL can be interfered with due to the reduced functionality caused by the disease[6,7]. Thus, stroke causes a great impact on people's lives, whether individually, family or socially, as activities such as work and leisure are impaired, and the rehabilitation process until their reintegration into the family and society is challenging.

Given the above, considering the limitations caused by stroke, where they can affect their quality of life, this study is

justified. In addition, there was an interest in conducting this research based on experiences lived by researchers in a center specializing in the care of stroke patients, making it relevant for the analysis of aspects that change their health condition, thus being able to alert and encourage health promotion aimed at improving the QL of the population studied. Therefore, the aim of the study was to analyze the QL of patients affected by stroke.

Materials ans Metods

Type of study and sample

This is a descriptive exploratory cross-sectional study, carried out in September and October 2019, in two clinic schools located in the city of Fortaleza-Ceará, the clinic schools Centro Integrado de Saúde Ateneu (CISA) and the Qualivida Project provide care clinics of different specialties in the health area.

The sample of this study was for convenience, being recruited to participate in the research all patients diagnosed with stroke in care during the aforementioned period in the aforementioned institutions.

This research was approved by the Research Ethics Committee of the Ateneu University Center (UNIATENEU), Fortaleza-Ceará, with opinion nº. 3,506,088, in accordance with Resolution 466/12 of the National Health Council. Participants consented to their participation by signing the Informed Consent Term (ICT).

Study design

After authorization, the patients were submitted to data collection with the application of three collection instruments, and the questionnaires were applied, in the clinics themselves after the service, without interference in the treatment routine of these patients, in a reserved place with the confidentiality of the Dice.

Inclusion and Exclusion Criterias

Patients with a clinical diagnosis of stroke, aged over 21 years, of both genders, and who were being treated at the aforementioned institutions during the period of collection that took place in September and October 2019, were included.

After detailed clarification of the study, the individuals or caregiver/companion were asked to sign the consent form. Those with a disability in communication (aphasia, oral dyspraxia and speech dyspraxia, and dysarthria), severe cognitive and visual deficits that impede comprehension, and those who did not reach the 20-point Mini-Mental State Examination score were excluded from the research.

Procedures

The collection instruments applied in the first stage were: 1) Mini-Mental State Examination (MMSE), Brazilian version. 2) Sociodemographic questionnaire, health and lifestyle history and 3) SF-36 (Medical Outcomes Study 36 – Item Short-Form Health Survey).

The MMSE serves to track cognitive declines, dementias and select patients who were able to answer the other questionnaires, with a cutoff point of 20 points. The MMSE is an instrument used to assess cognitive function, parameters regarding temporal and spatial orientation, immediate memory, calculation, language and constructive apraxia. The maximum score is 30 points, which can be influenced by the individual's education[8,9].

The sociodemographic, health history and lifestyle questionnaire, prepared by the researchers based on information contained in the National Health Survey[10], has 35 questions with sociodemographic variables (gender, age group, race, marital status, education, occupational status, monthly income , housing situation, family composition), health history (type of stroke, time of occurrence, risk factors and treatment), lifestyle (practice physical activity, use of legal and illegal drugs, stress level).

The SF-36 (Medical Outcomes Short-Form 36-item Health Survey) is a multidimensional, easy-to-understand questionnaire, translated and validated in

Brazil[11]. The SF-36 is a questionnaire recognized as the "gold standard" for assessing quality of health-related life (HRQOL), serving as a valid scale for the socioeconomic and cultural conditions of the Brazilian population and has been extensively taking advantage of stroke survivors, allowing to draw a global profile of the required psychosocial conditions of patients and their expectations in relation to life [12-14].

The questionnaire consists of 36 items, subdivided into eight domains: 1) Functional capacity (10 items) evaluating the presence and extent of limitations related to physical capacity; 2) Physical Aspects (4 items) evaluated as limitations regarding the type and amount of work, as well as how much these limitations hinder the performance of work and activities of daily living; 3) Pain (2 items) assesses the presence of pain, its intensity and its interference in activities of daily living; 4) General Health Status (5 items) assessed how the patient feels about their overall health; 5) Vitality (04 items) considers the level of energy and fatigue Social Aspects; 6) Social Aspects (02 items) analyzes the individual's integration in social activities; 7) Emotional (03 items) evaluation of the impact of psychological aspects on the patient's well-being and 8) Mental Health (05 items) includes questions about anxiety, depression, changes in behavior or emotional lack of control and psychological well-being[11,15]. The SF-36 has a final score from zero to 100 points, with zero corresponding to the worst and 100 to the best perception of QL[11].

Questionnaire data were affected by descriptive and inferential statistics using the SPSS Statistic version 23.0 IBM® program. For an analysis of data distribution, the Kolmogorov-Smirnov test was applied. The categorical variables will be through the absolute and relative frequency and as numerical variables through the mean ± standard deviation (SD).

Results

During the study, 20 patients affected by stroke were being treated at the CISA and Qualivida clinics, of which only 15 reached the necessary score on the MMSE (20 points) to enter the research.

Of the 15 patients, 9 (60.0%) were male and 6 (40.0%) were female. As for age, most were 60 years old or older, with ages ranging from 60 to 69 years old 6 (40.0%) and 71 to 79 years 2 (13.3%). Regarding self-reported race, white and brown were predominant with 7 (46.7%) respectively (Table 1).

In the health history it is observed that there was a prevalence of ischemic stroke verified in 11 (73.3%) of the patients and 4 (26.7%) hemorrhagic stroke. The perception of patients regarding their health in general is considered good for 14 (93.33%) patients and very good for only 1 (6.67%). All 15 (100%) patients needed help after hospital discharge. On the other hand, the continuity of physical therapy after discharge, 10 (66.7%) answered that they did not continue and 5 (33.3) said yes. Regarding other comorbidities present in patients, 7 (46.7%) are hypertensive, 5 (33.3%) are diabetic and 3 (20%) have some Cardiovascular Disease (Table 1).

With regard to lifestyle, regarding the practice of physical activity 8 (53.3%) practice some type of physical exercise, this practice was frequent in 3 (20%) doing it 3 times a week, followed by 2 (13, 3%) 2x a week and 2 1x a week. All 15 patients (100%) reported not using alcohol and cigarettes (Table 1).

Table 1. Distribution of sociodemographic variables, health history and lifestyle of patients affected by stroke, Fortaleza, Ceará, Brazil, 2019.

Variables	no	%
Sociodemographic variables		
Sex		
Male	9	60.00

Variables	no	%
Female	6	40.00
Age group		
30-39	2	13.3
40-49	2	13.3
50-59	**3**	20 ,0
60-69	6	40.0
70-79	2	13.3
Race		
White	7	46.7
black	1	6,7
brown	7	46.7
Health and Lifestyle History		
Type of stroke		
Ischemic Stroke	11	73.3
Hemorrhagic stroke	4	26.6
General health status		
Bad	0	0
Good	14	93.3
very good	1	6.6
Help after discharge		
Yes	15	100.0
Not	0	0
Upon leaving, the physiotherapy continued		
Yes	5	33.3
Not	10	66.7
Has Arterial hypertension		
Yes	7	46.7
Not	8	53.3
have diabetes		
Yes	5	33.3
Not	10	66.7
has CVD		
Yes	3	20.0
Not	12	80.0
practice physical activity		
Yes	8	53.3
Not	7	46.7
how many times a week		
1x per week	two	13.3
2x per week	two	13.3
3x per week	3	20.0
More than 3x a week	1	6,7
use of alcoholic beverage		
Yes	0	0
Not	15	100
cigarette use		
Yes	0	0
Not	15	100

Source: Authors, 2019.

In the analysis of the SF-36 questionnaire, the greatest impairment occurred in the domains: Physical, emotional and functional capacity, in addition to these, the others presented values considered low. However, the domain social aspects (SA) had the highest values with a mean score of 66.60 (±21.29) (Table 2).

Table 2. Distribution of the domains of the SF-36 questionnaire. Fortaleza, Ceará, Brazil, 2019.

SF36 Domains	Mean ± SD
CF	43.33 ± 26.70
AF	26.66 ± 6.45
ACHE	58.53 ± 20.39
EGS	59.53 ± 35.98
VITALITY	60.33 ± 18.65
AT	66.60 ± 21.29
AE	41.93 ± 23.57
SM	62.40 ± 11.39

CF= Functionaln Capacity; AF= Physical Aspects; D= Pain; EGS= General Health Status; V= Vitality; AS= Social Aspects; AE= Emotional Aspects; SM= Mental Health.

Source: Authors, 2019.

Discussion

This research aimed to analyze the quality of life of patients affected by stroke. Considered a Chronic Non-Communicable Disease (NCD), stroke generates numerous neurological limitations that compromise the physical and emotional capacity of individuals. Among the limitations, functional and cognitive changes stand out, in addition to triggering the onset of depressive symptoms, which interfere partially or totally in the performance of self-care, work and daily life activities, affecting the patient's QL[6,16].

In relation to sociodemographic variables, there was a greater proportion of 60% males, aged 60 years or over, predominantly white and brown in the sample. Therefore, it is suggested that with human aging the probability of a stroke is greater due to a series of contextual factors such as lifestyle and comorbidities, consequently the elderly are more subject to the onset of the disease than younger individuals. However, the incidence of the disease can occur at any stage of life, regardless of sex and color.

Research carried out in Brazil corroborates the results of the sociodemographic profile found in this research. According to studies such as those by Barella et al.[17], Araújo et al.[3], Da Silva et al.[18] and Pacheco et al.[19], it was found that the age group of patients affected by stroke occurred above 60 years, being greater in males with predominantly white and brown color. However, Carvalho and Deodato[20] verified in their study the prevalence of stroke in females, but the variables age and color were similar to the data found in this research.

The type of stroke is defined according to the lesion etiology. According to Asplund et al.2 the classification can be in ischemic and hemorrhagic, in addition to these, the disease can occur with a transitory condition, characterized by a focal ischemic lesion with rapid duration and complete reversal of the condition within 24 hours. The results of this research are consistent with the literature, verifying that ischemicn stroke occurred in 73.3% of the sample. Since epidemiological studies indicate that the largest number of cases is of the ischemic type[17,21,22].

Worldwide, stroke ranks second as the leading cause of death, being more frequent in adults and the elderly. In Brazil, due to changes in the morbidity and mortality profile in recent years, stroke as a NCD is responsible for a high rate of hospitalizations and mortality[23]. According to Langhorne et al.[24] ischemic stroke has a higher incidence and morbidity rate, occurring in 80% of cases. The physical and psychological sequelae that limit the performance of ADLs make the patient dependent on a caregiver during treatment and in many cases for life.

Our study found that the entire sample received help from family and/or

caregivers after hospital discharge. For Ovbiagele et al.[25], when patients return to their homes, they face new barriers such as performing ADLs, which were previously performed independently, but after the stroke, the tasks became dependent on specific aids , which makes it difficult to carry out these.

Family support together with a multidisciplinary approach contributes to an improvement in patients' QoL. Among the treatment approaches, physical therapy rehabilitation is of paramount importance for functional recovery, independence and autonomy, which consequently positively interferes in the biopsychosocial aspects of the studied population[26]. However, 66.7% of the patients in this study discontinued treatment physiotherapy after hospital discharge. However, this data may be related to the functional limitations and socio-economic conditions experienced by the sample.

Regarding the comorbidities that predispose to stroke, it was found in the sample that 7 (46.7%) Arterial hypertension, 5 (33.3%) had diabetes and only 3 (20%) had CVD. Regarding lifestyle, 15 (100%) do not use alcoholic beverages and cigarettes, as for the practice of physical exercise, 8 (53.3%) practice some type of physical activity at least 3 times a week.

Modifiable risk factors such as: stress, hypertension, diabetes, smoking, alcohol consumption, obesity and cardiovascular diseases are described in the literature as favorable comorbidities for the onset of cerebrovascular diseases, especially stroke[25,27,28]. However, studies point out that by adhering to a healthy lifestyle such as good nutrition and physical activity practices contribute significantly to maintaining adequate levels of motor autonomy, improving physical and mental health and socialization[19,29]. Therefore, the recurrence of the disease thus decreases as the incidence of new cases.

In the present study, factors related to biopsychosocial aspects that compromise the health conditions and QoL of individuals affected by stroke were evaluated. The scores obtained by the SF-36, which is the gold standard for assessing health-related QoL, showed that all domains of that instrument were compromised from the highest to the lowest degree, respectively: AF (26.76), AE (41.93), CF (43.33), D (58.53), EGS (59.53), V (60.33), SM (62.40) and AS (66.60).

Considering the 8 domains assessed by the SF-36, functional capacity and physical aspects assess the presence of limitations that hinder the performance of self-care activities, work, and others. Pain is checked for its presence, intensity and interference in ADLs, while general health status assesses how the patient feels in relation to their overall health. Social and emotional aspects analyze socialization, psychological impacts on the patient's well-being and mental health addresses issues about anxiety, depression, behavioral changes or emotional lack of control. Thus, the instrument enables the analysis of QL through a multidimensional view.

Studies carried out in Brazil found results similar to this research with regard to the SF-36 scores. Scalzo et al.[30] verified in their sample the following scores: PA (34.1), functional capacity (37.8), AE (53.9), pain (60.5), EGS (62.8), mental health (62.9), vitality (67.1) and lastly, AS (76.8). Similarly, another study carried out by Silva[31], obtained similar findings being CF (44.72), AF (44.40), EGS (62.08), V (78.61), AS (62.50), AE (50.00) SM (73.56).

Aspects related to physical capacity and functional performance measured in this study and present in the literature can be understood in light of the limitations such as dressing, bathing and even walking small distances independently, generating deficit in these patients, which is an important factor. in the perception of QL[28]. Emotional aspects are related to difficulties in their home environment, in their ADL's and especially at work, which can occur temporary or definitive leave due to

disability, this is a factor that contributes to the low score in the domain , corroborating the data of this research[30].

Quality analysis will always be a challenge and a comprehensive field, as it is subjective and specific to each individual. In this context, the health and life conditions of post-stroke people tend to decline due to the physical and emotional limitations imposed by the disease. However, the risk factors that predispose the incidence and recurrence of such a pathology can be avoided through the practices of healthy habits such as good nutrition and physical activity, requiring awareness and initiative by the government as well as society generally.

Furthermore, some limitations in this study are recognized, such as the convenience sample, which results in the limited number of participants and research sites, which makes it difficult to generalize the results. Another limiting point was the non-use of a specific questionnaire on QL in patients with stroke. However, the results of this study are relevant as they suggest that individuals affected by stroke start to suffer losses in their quality of life. Thus, it is expected that our findings will contribute to the discussion of the topic and encourage further research with larger samples.

Conclusion

Impairment in the perception of QL was observed with low values in all domains and especially in the physical, emotional and functional capacity aspects that generate a low QoL, with a higher frequency of patients with a clinical diagnosis of ischemic stroke, predominantly in individuals aged 60 years or over, male.

Therefore, despite the limitations found in this study, the results of this research are relevant to the subject studied, and can stimulate and guide new care practices, expanding disease prevention and encouraging health promotion actions to improve the well-being of the population studied. However, it is suggested that more research be carried out with larger samples so that the factors that affect the QoL of patients affected by stroke can be identified and minimized.

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