Anxiety and Depression Symptoms in Post Stroke Outpatients

Shokrgozar S (MD)[1]- *Soleimani R (MD)[1]- Maadi rad S (MD)[2]

*Corresponding Address: Kavosh Cognitive Behavioral Sciences and Addiction Research Center, School of medicine, Guilan University of Medical Sciences, Rasht, Iran.

Email: soleimani.dr@gmail.com

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Abstract

Introduction: Given the high prevalence of stroke, it seems necessary to investigate and identify the factors that increase morbidity and mortality following stroke. Among these factors are mental disorders after stroke which lead to increased morbidity and mortality, independently of other risk factors and the severity of the disease.

Objective: To investigate the frequency of depression and anxiety symptoms after stroke and its related factors.

Materials and Methods: The present study is a descriptive cross-sectional one performed on 155 patients referred to neurologic outpatient clinics, Rasht. All patients had been diagnosed with stroke for 6 months. The conventional sampling method was used. All patients were asked to complete the demographic questionnaire, Mini Mental State Examination, Hospital Anxiety and Depression Scale, and Functional Independence Measurement Scale. SPSS-22 software was used for data analysis.

Results: Results showed that 50% of patients had anxiety and 46% had depression. The type of stroke had a significant relationship with depression and anxiety (P= 0.05). Also, there was a significant relationship between brain involvement and cognitive status with anxiety and depression symptoms (P= 0.05) and the most frequent site of brain involvement was left.

Conclusion: Considering the high prevalence of depression and anxiety following stroke, timely diagnosis and treatment of such disorders can enhance the recovery process of corresponding patients, their quality of life, and their family.

Conflict of interest: non declared

Key words: Anxiety \ Depression \ Risk Factors \ Signs and Symptoms \ Stroke

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1. Kavosh Cognitive Behavioral Sciences and Addiction Research Center, School of medicine, Guilan University of Medical Sciences, Rasht, Iran.
2. Department of Psychiatry, School of Medicine, Guilan University of Medical Sciences, Rasht, Iran.

Extended Abstract

Introduction: Stroke is one of the most common neurological diseases and ischemic type is the most common one which usually causes cognitive disorders (1,2). Given the high prevalence of stroke, it seems necessary to investigate and identify the factors that increase morbidity and mortality following stroke. Among these factors are mental disorders after stroke which lead to increased morbidity and mortality, independent of other risk factors and the severity of the disease. Although post-stroke depression and anxiety were known, there is no consensus about predictive factors of depression and anxiety such as gender, age, location and the extent of brain involvement (3).

Objective: To investigate the frequency of depression and anxiety symptoms after stroke and their associated factors.

Materials and Methods: The present study was a descriptive cross-sectional study and the design was approved in the ethical board of the Guilan University of Medical Sciences, Rasht, Iran. (IR.GUMS.REC.1395.290). Participants were recruited from neurologic outpatient clinics, Rasht. All the patients had a history stroke in the past 6 months. Inclusion criteria were ischemic or hemorrhagic stroke on the CT scan or brain MRI confirmed by a neurologist and the ability to speak Farsi. Exclusion criteria were history of any serious psychiatric disorder, serious cognitive deficits, severe medical problems, and substance dependence. The conventional sampling method was used. Mini Mental State Examination (MMSE), Hospital Anxiety and Depression Scale (HADS), and Functional Independence Measurement (FIM) Scale were administrated to all patients.

The MMSE is a reliable and validated instrument used in screening for cognitive impairment. A high degree of correlation was shown between this test and standard tests of cognitive function (4). Agrell and Dehlin reported an acceptable validity of the MMSE in detecting cognitive dysfunction early post-stroke in the old patient population (5). In this study, patients were excluded if the MMSE score was less than 18. The Hospital Anxiety and Depression Scale (HADS) is a brief instrument to measure psychological distress. This questionnaire contains 14 items and consists of two subscales: anxiety and depression. Each item is rated on a four-point scale, giving maximum scores of 21 for anxiety and depression. Scores of 11 or more on either subscale are considered to be a significant case of psychological morbidity (6). Functional status was assessed with the FIM instrument. The FIM is an 18-item scale and comprises 13 motor (or physical) and 5 social-cognitive items. Scores can range from 18 (total assistance in all areas) to 126 (complete independence in all areas) (7). All analyses were performed with the SPSS-22 software.

Results: One hundred and fifty five patients (68 females and 87 males) participated in this study. In total, 110 patients were with ischemic stroke and others with hemorrhagic stroke. Moreover, most of patients had chronic stroke (49%). Mild to moderate cognitive dysfunction was detected in 123 patients (79.4%). Fifty percent of patients had anxiety which was mainly mild to moderate (75%). There was a significant relationship between the type of stroke and the severity of anxiety. The results revealed the higher frequency of severe anxiety in patients with sub-acute stroke, while moderate anxiety was more in chronic type of stroke.

The results also revealed that 46% patients had depression with a significant relationship between the type of stroke and the severity of depression. Again it was mainly mild to moderate in the sub-acute and chronic types of stroke.

We could found no significant relationship between physical functioning and anxiety (P= 0.27) nor between physical functioning and depression (P=0.226). However, there was a significant relationship with depression and anxiety (P = 0.05). The frequency of anxiety and depression in patients with left hemisphere cerebrovascular accident was significantly more than that in patients with right hemisphere stroke (anxiety: 57.9% in left and 36.7% in right, P = 0.05; depression: 70.5% in left and 42.1% in right, P= 0.05). There was a significant relationship between brain involvement and cognitive status with anxiety and depression symptoms (Ps<0.001). Although anxiety and depression were significantly more in females,compared to males, we did not observe any significant relationship between anxiety/depression and education level.

The results showed a significant relationship between anxiety/depression and cognitive dysfunction (P<0.001) and gender (higher frequency in females, P<0.001). However, no significant association between anxiety/depression and FIM scale score was observed.

Conclusion: The results of our study revealed that the frequency of depression was 46%. This finding was similar to previous studies in Iranian population (8, 9). In contrast with our study, a meta-analysis by Ayerbe et al revealed that pooled prevalence of depression was 29%, and remains stable up to 10 years post-stroke (10). This difference could be due to various methods used, source of patient recruitment, the timing of assessment, and the different study settings. The prevalence of anxiety following stroke in the present study was 50%, consistent with the findings of previous research (8, 11). We found that being female could be a risk

factor for anxiety and depression, the reason is still unclear. Moreover, we found a significant relationship between the prevalence of anxiety and depression after stroke and the stroke of left hemisphere. The type of brain lesions, the type of support, and genetic factors may be involved in this problem (12). Therefore, timely diagnosis and treatment of such disorders could improve the recovery process of patients and their quality of life.

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