ORIGINAL RESEARCH

Analysis of occurrence of anxiety and depression in patients with stroke

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ABSTRACT
Background: Anxiety can be debilitating after a stroke. As with stroke trialists, intervention trials have treated anxiety as a homogenous disorder, ignoring the variety of treatment approaches for phobic and generalized anxiety. The present study was conducted to assess anxiety and depression following stroke. **Materials & Methods:** 124 patients of stroke of both genders were studied. Parameters such as type of stroke, underlying disease, and stroke onset were recorded. **Results:** Out of 87 patients, 48 were males and 39 were females. Type of stroke was infarct in 45 and hemorrhagic in 43, weakness side was right in 36, left in 38 and bilateral in 13 patients. Comorbid diseases seen were diabetes in 47, hypertension in 79, dyslipidemia in 61, previous stroke in 17, smoking in 37, alcoholism in 28 patients. The difference was non- significant (P> 0.05). Common risk factors for anxiety and depression in patients with stroke was male gender (1.76), dyslipidemia (0.57), infarction (2.34), hypertension (0.48), and smoking (0.32). The difference was significant (P< 0.05). **Conclusion:** Anxiety and depression are common after a stroke. Common risk factors were infarction, smoking, dyslipidemia, hypertension, and male gender.

Keywords: Anxiety, depression, Smoking

INTRODUCTION

Anxiety can be debilitating after a stroke. As with stroke trialists, intervention trials have treated anxiety as a homogenous disorder, ignoring the variety of treatment approaches for phobic and generalized anxiety. Anxiety is common; it has a role in around 33% of transient ischemic attacks (TIAs) and 25% of strokes. After a stroke, it might hinder the healing process and prevent patients from returning to their usual activities.[1,2] Despite earlier reports suggesting phobic anxiety may exist after stroke, intervention studies have evaluated general treatments, such as relaxation and antidepressants, which are unlikely to be helpful in treating phobic anxiety. They have also treated anxiety poststroke as a single unitary phenomenon.[3]

As of right now, there are no definitive clinical trial results to guide the treatment of anxiety after a stroke. It is well established that in people without a history of stroke, phobic condition and generalized anxiety disorder (GAD) require different therapeutic approaches.[4,5] Depression has been associated with physical impairments, limitations on activities of daily living (ADL), and a decline in quality of life (QOL). The physical impairment and quality of life of stroke patients were also affected by anxiety. It's intriguing to assess how depression and anxiety impact quality of life and functional outcomes during rehabilitation.[6] Emotional changes related with cerebrovascular sickness may be due to psychological reactions or the patient's own brain damage. Nonetheless, early identification and management of anxiety and depression symptoms could prevent moredetrimental impacts on neurological outcomes in stroke patients.[7]The present study was conducted to assess anxiety and depression following stroke.

MATERIALS & METHODS

The present study consisted of 87 patients of stroke of both genders. All were informed regarding the study and their family's written consent was obtained.

Data such as name, age, gender, etc. are recorded. The type of stroke, the underlying ailment, and the date the stroke started were all noted variables. Functional capacity is assessed using the Barthel Index (BI), cognitive function is assessed using the Thai Mental

State Examination (TMSE), quality of life is assessed using the WHOQOL-BREF questionnaire, and emotional state is assessed using the Hospital Anxiety and Depression Scale (HADS). The cut-off point for anxiety or depression on the HADS scale is greater than 10. Its overall score is 21 points (0 greatest, 21 worst). Results thus obtained were subjected to statistical analysis. P value less than 0.05 was considered significant.

RESULTS

Table I Distribution of patients

Total- 87		
Gender	**Males**	**Females**
Number	48	39

Table I shows that out of 87 patients, 48 were males and 39 were females.

Table II Assessment of parameters

Parameters	Variables	Mean	P value
Type	Infarct	45	0.93
	Hemorrhagic	43	
Side	Right	36	0.41
	Left	38	
	Bilateral	13	
Comorbidity	Diabetes	47	0.52
	Hypertension	79	
	Dyslipidemia	61	
	Previous stroke	17	
	Alcoholism	28	
	Smoking	37	

Table II, graph I shows that type of stroke was infarct in 45 and hemorrhagic in 43, weakness side was right in 36, left in 38 and bilateral in 13 patients. Comorbid diseases seen were diabetes in 47, hypertension in 79, dyslipidemia in 61, previous stroke in 17, smoking in 37, alcoholism in 28 patients. The difference was non-significant (P> 0.05).

Graph I Assessment of parameters

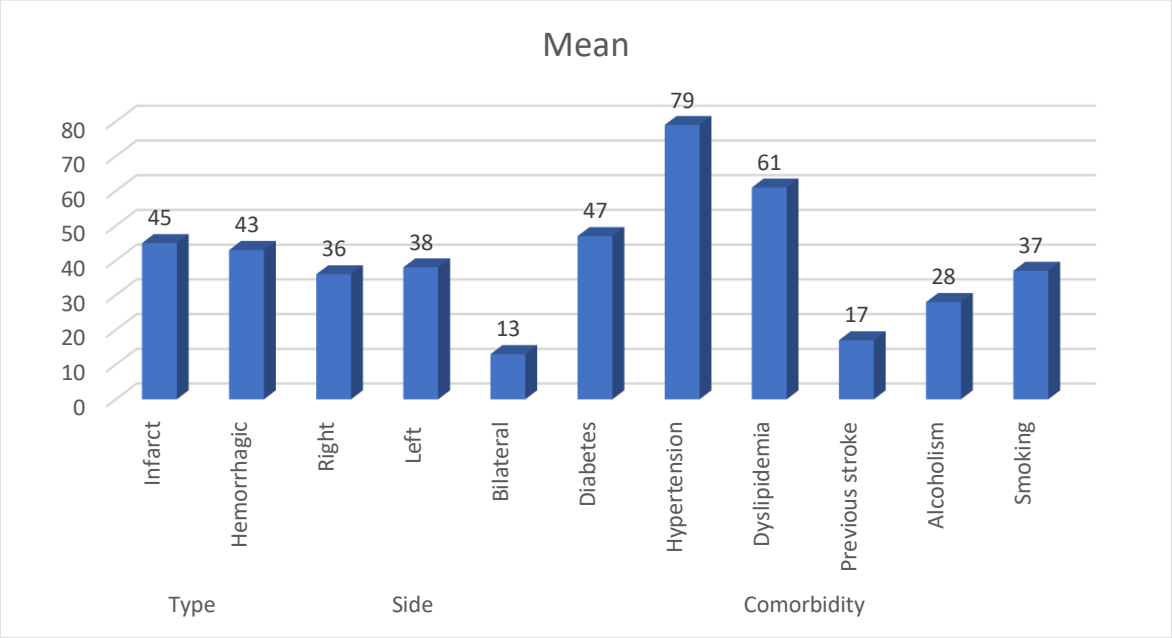

Table III Logistic regression analysis of risk factors with anxiety and depressive symptoms

Variables	Crude OR	P value
Male gender	1.76	0.05
Dyslipidemia	0.57	0.01
Infarction	2.34	0.02

Hypertension	0.48	0.05
Smoking	0.32	0.04

Table III shows that common risk factors for anxiety and depression in patients with stroke was male gender (1.76), dyslipidemia (0.57), infarction (2.34), hypertension (0.48), and smoking (0.32). The difference was significant (P< 0.05).

DISCUSSION

Stroke is a leading cause of dementia, disability, and mortality. 20% of survivors need institutional care, 15% to 30% become chronically handicapped, and it is a significant cause of functional impairments and a risk factor for seizures and falls.[8] One common post-stroke syndrome is depression. The World Health Organization (WHO) defines stroke as "rapidly developing clinical signs of focal disturbance of cerebral function lasting more than 24 hours or leading to death, with no apparent cause other than that of vascular origin."[9] According to their pathophysiology, strokes can be divided into two primary groups: ischemic strokes, which account for 50% to 85% of all strokes worldwide, and hemorrhagic strokes, which are caused by bleeding from one of the arteries in the brain.[10]**The relationship between depression and stroke has been recognized by medical professionals for more than a century, but rigorous studies on depression following stroke have only been conducted in the last 30 to 45 years.**It has also been the most frequently seen psychological sign during the post-stroke era of research.[11] That being said, other signs of psychological distress have been seen and investigated in this population besides depression. Among the other symptoms that are frequently seen are anxiety, apathy, weariness, sleep difficulties, etc.[12]The present study was conducted to evaluate anxiety and depression following a stroke.

We found that out of 87 patients, 48 were males and 39 were females. Parikh et al[13], the impact of clinically diagnosed depression on recovery in activities of daily living over a 2-year follow-up was examined in a prospective study of 63 stroke patients. Although impairment in activities of daily living, neurologic diagnoses and findings, lesion location and volume as measured on computed tomographic scan, demographic variables, cognitive impairment, and social functioning were comparable between depressed (n = 25) and nondepressed (n = 38) patients during their acute hospitalization, the two groups had different patterns of recovery in activities of daily living. At 2 years after suffering a stroke, patients with an in-hospital diagnosis of depression (either major or minor depression) were significantly more impaired in both physical activities and language functioning than were non-depressed patients. Among patients with major depression, this disparity in the recovery profile was present even after the depression had remitted. This study emphasizes the need for early recognition and treatment of poststroke depression.

We found that type of stroke was infarct in 45 and hemorrhagic in 43, weakness side was right in 36, left in 38 and bilateral in 13 patients. Comorbid diseases seen were diabetes in 47, hypertension in 79, dyslipidemia in 61, previous stroke in 17, smoking in 37, alcoholism in 28 patients. We found that common risk factors for anxiety and depression in patients with stroke was male gender (1.76), dyslipidemia (0.57), infarction (2.34), hypertension (0.48), and smoking (0.32). Masskulpan et al[14] comprised 251 stroke patients. The Hospital Anxiety and depression Scales (HADS) were used to assess anxiety and depression symptoms in stroke patients twice: once upon admission and once upon exit from the rehabilitation program. Univariate and multivariate logistic regression analyses were used to identify factors linked to symptoms of depression and anxiety. The Barthel ADL Index (BI) and WHOQOL-BREF questionnaires were used to measure and assess functional ability and quality of life, respectively. It was discovered that of the patients, 17.5% had symptoms of both depression and anxiety, while 25.5% had indications of anxiety. Anxiety symptoms had a negative correlation with dyslipidemia and a positive correlation with depressive symptoms.Anxiety symptoms and feminine gender were associated with depressive symptoms. At admission and after discharge, patients with anxiety and depression symptoms reported worse quality of life and functional capacity than those without symptoms. Patients without anxiety symptoms reported improved functional outcomes and quality of life following the rehabilitation program. Nonetheless, during rehabilitation, patients' functional outcomes improve whether or not they exhibit symptoms of depression. In contrast to patients with depression, those without depressive symptoms demonstrated a greater number of items of improvement in QOL.

CONCLUSION

Authors found that Anxiety and depression are common after a stroke. Common risk factors were infarction, smoking, dyslipidemia, hypertension, and male gender.

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