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Original Research

Anxiety and depression following stroke- A clinical study

[1]Tushar Goyal, [2]Deepak Bansal

[1]Associate Professor, Department of Psychiatry, Rajshree Medical Research Institute, Bareilly, Uttar Pradesh, India;
[2]Assistant Professor, Department of General Medicine, Rajshree Medical Research Institute, Bareilly, Uttar Pradesh, India

ABSTRACT:
Background: Following a stroke, anxiety is often crippling. Intervention trials have ignored the many treatment modalities for phobic and generalized anxiety, treating anxiety as a homogenous illness, as stroke trialists have done. The present study was conducted to evaluate anxiety and depression following a stroke. **Materials & Methods:**124 patients of stroke of both genders were studied. Parameterssuch as type of stroke, underlying disease, and stroke onset were recorded. **Results:** Out of 124 patients, males were 70 and females were 54. The type of stroke was infarct in 60 and hemorrhagic in 64, weakness side was right in 40, left in 54, and bilateral in 30 patients. Comorbid diseases seen were diabetes in 52, hypertension in 74, dyslipidemia in 102, and previous stroke in 29 patients. Smoking was present in 74, and alcoholism in 82 patients. The difference was significant (P< 0.05). Common risk factors for anxiety and depression in patients with stroke werehypertension (0.42), smoking (0.35), male gender(1.72), dyslipidemia (0.53), and infarction (2.31). The difference was significant (P< 0.05). **Conclusion:** Following a stroke, anxiety and depression are frequent. Male gender, smoking, dyslipidemia, hypertension, and infarction were common risk factors.
Keywords: Anxiety, depression, Smoking

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Corresponding author: Deepak Bansal, Assistant Professor, Department of General Medicine, Rajshree Medical Research Institute, Bareilly, Uttar Pradesh, India

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INTRODUCTION

Following a stroke, anxiety is often crippling. Intervention trials have ignored the many treatment modalities for phobic and generalized anxiety, treating anxiety as a homogenous illness, as stroke trialists have done.[1] Anxiety is prevalent; it contributes to approximately 25% of strokes and nearly 33% of transient ischemic attacks (TIAs). It can impede the recovery process following a stroke and keep patients from getting back to their regular activities.[2] Intervention studies have assessed general treatments, including relaxation and antidepressants, which are unlikely to be beneficial in treating phobic anxiety, and have addressed anxiety poststroke as a single unitary phenomenon, despite previous reports indicating phobic anxiety might be present after stroke.[3]

There is currently no conclusive data from clinical trials to direct the management of anxiety following a stroke. It is commonly known that phobic disorder and generalized anxiety disorder (GAD) require distinct treatment modalities in individuals without a history of stroke.[4] Physical disabilities, restrictions on activities of daily living (ADL), and decreased quality of life (QOL) have all been linked to depression. Anxiety also impacted stroke patients' quality of life and physical impairment. Evaluating how anxiety and depression affect functional result and quality of life throughout rehabilitation is interesting.[5]The patient's brain damage itself may be the cause of emotional changes associated with cerebrovascular illness, or psychological responses may be to blame. However, early detection and treatment of depressive and anxious symptoms could avert more detrimental impacts onneurological outcomes in stroke patients.[6]The present study was conducted to evaluate anxiety and depression following a stroke.

MATERIALS & METHODS

The present study comprised 124 patients of stroke of both genders. All were informed regarding the study and their written consent was obtained.

Demographic profiles such as name, age, gender, etc. are recorded. Recorded variables werekind of stroke, the underlying illness, and the date the stroke began. The Barthel Index (BI) is used to measure functional ability; the Thai Mental State Examination (TMSE) is used to test cognitive function; the WHOQOL-BREF questionnaire is used to measure quality of life; and the Hospital Anxiety and Depression Scale (HADS) is used to measure emotional state. The HADS scale has a cut-off point of more than 10 to indicate anxiety or depression. It has 21 points total (0 best, 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- 124		
Gender	**Males**	**Females**
Number	70	54

Table I shows that out of 124 patients, males were 70 and females were 54.

Table II Patient characteristics

Variables	Parameters	Mean	P value
Type of stroke	Infarct	64	0.73
	Hemorrhagic	60	
Weakness side	Right	40	0.81
	Left	54	
	Bilateral	30	
Comorbid diseases	Diabetes	52	0.02
	Hypertension	74	
	Dyslipidemia	102	
	Previous stroke	29	
Smoking	Yes	74	0.81
	No	50	
Alcoholism	Yes	82	0.03
	No	42	

Table II, graph I shows that type of stroke was infarctin 60 and hemorrhagicin 64, weakness sidewas right in 40, left in 54 and bilateral in 30 patients. Comorbid diseases seen were diabetesin 52, hypertension in 74, dyslipidemia in 102 and previous stroke in 29 patients. Smoking was present in 74, alcoholism in 82 patients. The difference was significant (P< 0.05).

Graph I Patient characteristics

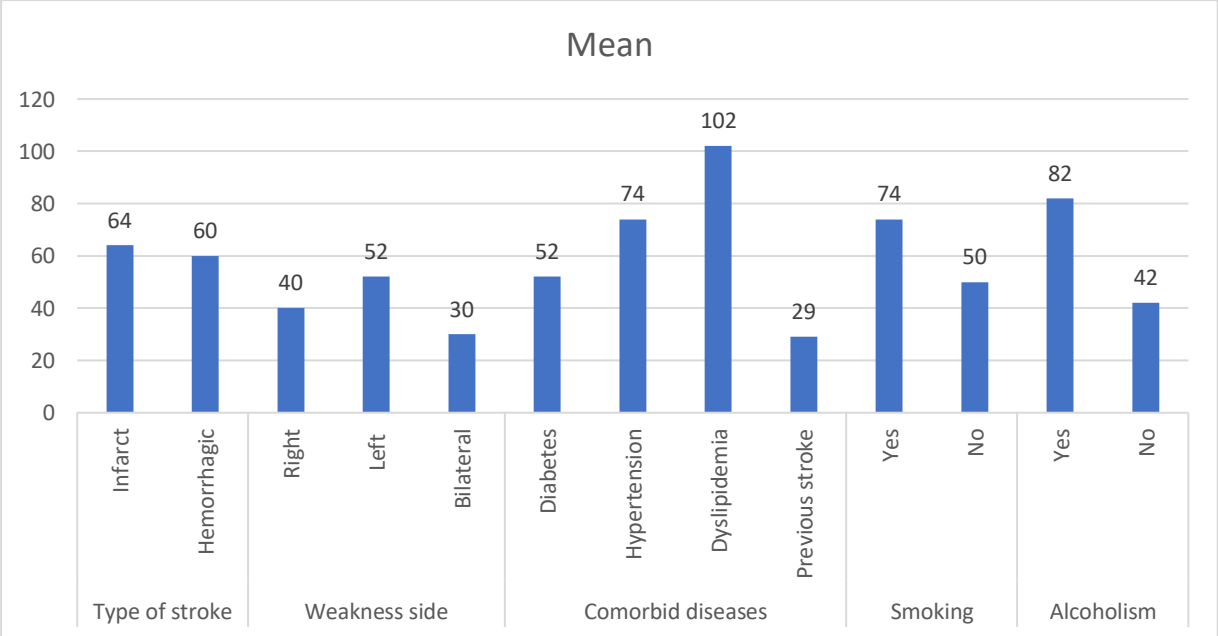

Table III Univariate analysis and multivariate logistic regression analysis of risk factors with anxiety and depressive symptoms

Variables	Crude OR	P value
Hypertension	0.42	0.04
Smoking	0.35	0.02
Male gender	1.72	0.04
Dyslipidemia	0.53	0.02
Infarction	2.31	0.03

Table III shows that common risk factors for anxiety and depression in patients with stroke was hypertension (0.42), smoking (0.35) and male gender(1.72), dyslipidemia (0.53), and infarction (2.31). The difference was significant (P< 0.05).

DISCUSSION

One of the main causes of dementia, disability, and death is stroke. In addition to being a major source of functional impairments and a risk factor for epilepsy and falls, 20% of survivors require institutional care, and 15% to 30% become permanently incapacitated. Depression is a typical post-stroke condition.[7] "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," is how the World Health Organization (WHO) describes stroke.[8] Based on their pathophysiology, strokes fall into two main categories: hemorrhagic strokes, which result from bleeding from one of the brain's arteries, and ischemic strokes, which are responsible for 50% to 85% of all strokes globally.Although doctors have known for over a century that depression and stroke are related, systematic research on depression after stroke has only been carried out in the last thirty to forty-five years.[9] It has also been the most frequently seen psychological sign during the post-stroke era of research. 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.[10]The present study was conducted to evaluate anxiety and depression following a stroke.

We found thatout of 124 patients, males were 70 and females were 54. The type of stroke was infarct in 60 and hemorrhagic in 64, weakness side was right in 40, left in 54, and bilateral in 30 patients. The study conducted by Masskulpan et al[11] 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.

We found that comorbid diseases seen were diabetes in 52, hypertension in 74, dyslipidemia in 102, and previous stroke in 29 patients. Smoking was present in 74, and alcoholism in 82 patients. Common risk factors for anxiety and depression in patients with stroke werehypertension (0.42), smoking (0.35) male gender (1.72), dyslipidemia (0.53), and infarction (2.31).The prevalence rate of 46% was observed by Caeiro et al[12] and 52% by Nys et al[13]in studies carried out on stroke patients within almost the same interval following stroke. However, other studies done during similar post-stroke intervals provided mixed results. Fure et al[14] using the same scale observed a prevalence rate of 26.4% anxiety, 14% depressive symptoms, and nearly 8% of patients with co-morbid symptoms.

CONCLUSION

Authors found that following a stroke, anxiety and depression are frequent. Male gender, smoking, dyslipidemia, hypertension, and infarction were common risk factors.

REFERENCES

1. Sharpe M, Hawton K, Seagroatt V, Bamford J, House A, Molyneux A, et al. Depressive disorders in long-term survivors of stroke. Associations with demographic and social factors, functional status, and brain lesion volume. Br J Psychiatry 1994; 164: 380-6.
2. Parikh RM, Robinson RG, Lipsey JR, Starkstein SE, Fedoroff JP, Price TR. The impact of poststroke depression on recovery in activities of daily living over a 2-year follow-up. Arch Neurol 1990; 47: 785-9.
3. Angeleri F, Angeleri VA, Foschi N, Giaquinto S, Nolfe G. The influence of depression, social activity, and

family stress on functional outcome after stroke. Stroke 1993; 24: 1478-83.
4. Astrom M, Asplund K, Astrom T. Psychosocial function and life satisfaction after stroke. Stroke 1992; 23: 527-31.
5. Burvill PW, Johnson GA, Jamrozik KD, Anderson CS, Stewart-Wynne EG, Chakera TM. Anxiety disorders after stroke: results from the Perth Community Stroke Study. Br J Psychiatry 1995; 166: 328-32.
6. Castillo CS, Starkstein SE, Fedoroff JP, Price TR, Robinson RG. Generalized anxiety disorder after stroke. J Nerv Ment Dis 1993; 181: 100-6.
7. Astrom M. Generalized anxiety disorder in stroke patients. A 3-year longitudinal study. Stroke 1996; 27: 270-5.
8. Kuptniratsaikul V, Kovindha A, Massakulpan P, Piravej K, Suethanapornkul S, Dajpratham P, et al. An epidemiologic study of the Thai Stroke Rehabilitation Registry (TSRR): A multi-center study. J Med Assoc Thai 2008; 91: 225-33.
9. Zigmond AS, Snaith RP. The hospital anxiety and depression scale. Acta Psychiatr Scand 1983; 67: 361-70.
10. Andersen G, Vestergaard K, Ingemann-Nielsen M, Lauritzen L. Risk factors for post-stroke depression. Acta Psychiatr Scand 1995; 92: 193-8.
11. Masskulpan P, Riewthong K, Dajpratham P, Kuptniratsaikul V. Anxiety and depressive symptoms after stroke in 9 rehabilitation centers. Medical journal of the Medical Association of Thailand. 2008 Oct 1;91(10):1595.
12. CaeiroL,FerroJM,SantosCO, Figueira ML.Depressioninacute stroke.JPsychiatryNeurosci. 2006;31(6):377–383.
13. Nys GMS, van Zandvoort MJE, Van der Worp HB, de Haan EHF, de Kort PLM, Kappelle LJ. Early depressive symptoms after stroke: neuropsychological correlates and lesion characteristics. J Neurol Sci. 2005;228(1):27–33.
14. Fure B, Wyller TB, Engedal K, Thommessen B. Emotional symptoms in acute ischemic stroke. Int J Geriatr Psychiatry. 2006;21(4):382–387.