

Psychiatric morbidities among post-stroke patients: a cross sectional observation in Bangladesh

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Summary

Stroke is a common neurological disorder with high mortality and disability rates worldwide. The burden of psychiatric co-morbidity is not well documented in developing countries like Bangladesh. The objective of the study was to examine the frequency and pattern of common psychiatric disorders present in stroke survivors in a medical college hospital of Dhaka, Bangladesh. A cross-sectional study was conducted from October 2017 to April 2018 in the Neuro-science Department in Z H Sikder Women's Medical College Hospital, Dhaka. A total of 50 patients with stroke were evaluated to study the frequency and characteristics of psychiatric morbidities. The participants were interviewed by experienced neurologists and psychiatrists. Informed consent as well as socio-demographic data was obtained and each patient was evaluated for psychiatric morbidity using the Mini International Neuropsychiatric Interview (MINI). Mean age of the respondents was 58.28 (\pm 12.61) years, age ranging from 41 to 82 years. Out of 50 respondents, 80% were male, 44% had educational qualification below SSC, 54% had multiple risk factors of stroke. The results further showed that 20% respondents developed anxiety disorders, 70% developed major depressive disorder and 10% developed stress disorder. There is a significant burden of psychiatric co-morbidity found in stroke survivors in Bangladesh. This may go unnoticed, if not actively screened for by clinicians and could impact negatively on management outcomes if not attended appropriately.

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Introduction

Stroke is the most common cause of mortality worldwide and the third most common cause in developed countries.^{1,2} It is defined by the World Health Organization (WHO) as 'rapidly developing clinical signs of disturbance in focal or global cerebral function, with symptoms lasting for up to 24 hours or longer or leading to death with no other apparent cause than of vascular origin'.²⁻⁴ Almost 85% of strokes are ischemic, while 12% are hemorrhagic. There are 700,000 strokes annually in the United States and 163,000 stroke related deaths according to the latest statistics of the American Heart Association.³ Individuals who survive this potentially deadly event are often left with significant physiologic and psychiatric complications.⁵ We mostly focus on physical and cognitive problems occurring as a consequence of stroke and do not show enough concern to emotional problems.⁶ Meta-analyses of point-prevalence rates suggest that one third of stroke-survivors develop post-stroke depression and one quarter develop post-stroke anxiety while more than half of stroke survivors will be affected by depression at some point.^{2,7} Emotional changes related to cerebrovascular disease may be caused by patient's brain damage per se or by psychological reactions.⁶ Emotional problems may lead to a complicated clinical presentation, poor response to treatment, and sometimes unnecessary investigations. From previous studies we know that co morbid depressive disorders significantly increase medical costs, but it is not related to psychiatric consultation.⁶⁻⁸ Emotional problems influence stroke patient recovery of motor and cognitive deficits as well as the mortality risk associated with stroke.⁶ Neuropsychiatric disorders are often associated with stroke and, among them, depression is the most prevalent. It is frequently associated with psychiatric symptoms such as depressed mood, anxiety, apathy, cognitive disorder, mania, psychosis, pathological affective display, posttraumatic stress disorder (PTSD), catastrophic reactions, fatigue, and anosognosia.^{1,3-5,9} Patients who develop depression after stroke have been associated with increased disability, cognitive impairment, risk of falls, have a stronger correlation with significant impairment, poor rehabilitation outcome, poor quality of life, and higher mortality than those without significant depressive symptoms.⁷ The objective of the study was to examine the frequency and pattern of common psychiatric disorders present in stroke survivors in a medical college hospital of Dhaka, Bangladesh.

Materials and methods

This was a cross sectional study, conducted from October 2017 to April 2018 in the Neuro-Science Department in Z H Sikder Women's Medical College Hospital, Dhaka, Bangladesh. A total of 50 patients with stroke were evaluated purposively to study the frequency and characteristics of psychiatric morbidities. The participants were interviewed by experienced neurologists and psychiatrists. Informed consent as well as socio-demographic data was obtained and each patient was evaluated for psychiatric morbidity using the Mini International Neuropsychiatric Interview (MINI). Patients with transient ischemic attack, previous emotional problems, severe aphasia, or clouding of consciousness were excluded from the study. Stroke was diagnosed according to history, general and neurological examinations and computed tomography scan. All assessments were made by neurologists and psychiatrists. Descriptive statistics was used for demographic data.

Results

Out of 50 respondents, 40 (80%) were male and 10 (20%) female, mean age was 58.28 (± 12.61) years, age ranging from 41 to 82 years. The characteristics of stroke patient are shown in Table 1. Most of the respondents were Muslim (92%). 44% had educational qualification of below SSC, and 16% had education up to masters level. (Table 1)

Table 1: Distribution of demographic variables of the respondents (n=50)

Variables	Frequency	Percent
Sex		
Male	40	80
Female	10	20
Religion		
Muslim	46	92
Hindu	4	8
Education		
Bellow SSC	24	44
SSC	10	20
HSC	4	8
Graduate	4	8
Postgraduate	8	16

Among the respondents 54% had multiple risk factors of stroke, 20 % had dyslipidemia, 16% had smoking, and 10% had hypertension. Ten patients (20%) developed destructive behavior to the surrounding environment and 90% had strokes on left cerebral hemisphere (Table 2).

Table 2: Factors related to stroke (n=50)

Factors	Frequency	Percent
Risk factors of stroke		
Dyslipidemia	10	20
Smoking	8	16
Hypertension	5	10
Multiple	27	54
Behavior to others		
Constructive	40	80
Destructive	10	20
Domain of brain		
Left hemisphere	45	90
Right hemisphere	5	10

The results further showed that 20% respondents developed anxiety disorders, 70% developed major depressive disorder and 10% developed stress disorder (Figure 1).

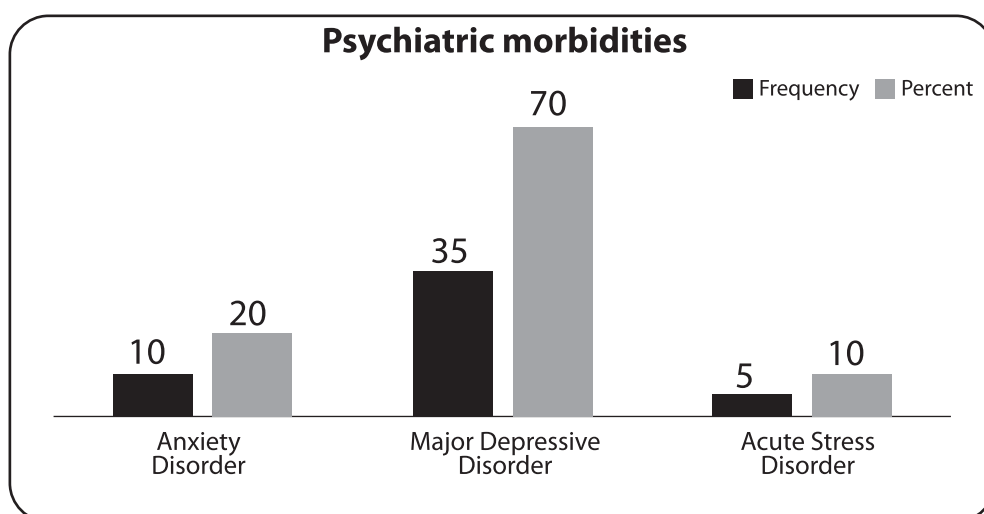


Figure 1: Psychiatric morbidities among the post stroke patients

Discussion

Demography of the respondents revealed, out of 50 patients, 80% were male and 20% were female. Mean age of the respondents was 58.28 ± 12.61 , age ranging from 41 to 82 years. Previous studies revealed similar age distributions. Glamcevski et al. (2012) found the average age was 58.6 years (± 12.5), ranging from 22 to 81 years among 80 patients in Malaysia.¹⁰ Ibeneme et al. found that age range and mean age were 26–66 years and 54.76 ± 8.79 years, respectively.⁸ Similar gender distribution was also noticed in previous study conducted by Singh et al. in India where out of 50 patients, 24% were female and 76% were male.⁴

The results further showed that 20% respondents developed anxiety disorders, 70% developed major depressive disorder and 10% developed stress disorder. Different studies revealed different psychiatric morbidity pattern but majority of the studies found depression as the most common psychiatric morbidity.^{1,10,11} Vuletić et al. found that 55% patients had depressive symptoms, 40% patients had anxiety symptoms and all patients with anxiety symptoms also had depressive symptoms.⁶ Glamcevski et al. (2012) in Malaysia found that 66% of the patients were depressed, 51% were mildly depressed and 14% were moderate to severely depressed.¹⁰ Nigerian studies of psychiatric morbidity among stroke patients reported an overall psychiatric morbidity of 36.0% with depression representing 19.0% and generalized anxiety disorder 9.6% while phobia was 1.2%.² Study by Singh et al. in India revealed depression in 24%, anxiety disorders in 26%, adjustment disorders in 12% and sexual dysfunction in 50% of the cases.⁴ According to the study by Wang et al., the prevalence rates for post-stroke PTSD have been estimated between 6% and 31%.¹² In Nigeria, Ajiboye et al. found depression in 19.2%, generalised anxiety disorder in 9.6%, harmful alcohol use in 2.4% of the respondents; each of dementia, somatoform disorder, phobia and delusional disorder had a prevalence of 1.2%.¹³ Glozier et al. (2017) found that the point prevalence of insomnia at each time point in the year after stroke was 30–37% and more common in females.¹⁴ Depression is still under-recognized and undertreated, especially in stroke patients.^{1,6} It is known that co-morbid depressive disorders increase the social and economic burdens to the individual and the society as a whole, and that effective treatment reduces disability and costs.⁶ The psychological burden of the post-stroke depressed patients' family members is also a big problem. A multidimensional approach taking into account biological, psychological and social perspectives is currently the most reasonable to the understanding of depressive symptoms following stroke, and to foster the development of evidence-based therapeutic strategies.¹

Conclusion

Though with this single centered study generalization is difficult, but the results indicate that patients with stroke have high levels of psychiatric morbidity. Screening patients with neurological disorders for psychiatric problems and timely psychiatric intervention can go a long way in improving the quality of life of these patients.

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