Knowledge about Stroke among the Patient's Attendant in a Selected Hospital

Most Luthy Begum [1], Md. Rafiqul Islam [2], Md. Azizul Islam.[3]

Abstract

This descriptive type of cross sectional study was conducted to assess the knowledge about stroke among the patient's attendant in Rangpur Medical College Hospital, Bangladesh with a sample size was 183 and the mean age of respondents were 52.81±9.707 years. It was reported according to the level of education from the study that 51.9% had completed HSC to graduate which was followed by 33.4% up to SSC, 9.8% were in nursing sciences and 4.9% were MBBS and above. Study found that 40.4% involved in service, followed by 29.5% involved in business, 15.4% were housewife, 9.8% were nurse and rest 4.9% were doctor. Among them 33.4% of the respondents had monthly income as less than BDT 20,000/-, followed by 29% had it as BDT 21,000/- to 30,000/-, 16.9% had it as 41,000/- to 50,000/-, 15.8% had it as BDT 31,000/- to 40,000/- and rest 4.9% had it as above BDT 50,000/-. Study revealed in multiple responses that out of all (92.9%) meant it was brain disease, 79.2%, 44.3% and 30.6% it was cardiovascular disease, nerve disease and heart disease respectively. Findings reported by type of stroke that 47.5% were hemorrhagic stroke, followed by 3.8% non-hemorrhagic and 1.1% ischemic. It was also reported that 24.6% respondents had knowledge about affected side of stroke and it was right side of brain, 23% left side of brain and 20.2% both side of brain. 100% of the respondents had knowledge about hypertension which was a risk factor of stroke, 97.3% alcoholism,77.6% smoking and 72.1% diabetes mellitus was a risk factor. Research found the association between gender and knowledge on risk factor of stroke was hypertension which was strongly significant (p-value was 0.007, which <.05). It was concluded that the implementation of screening program should be initiated in the community to identify the risk factors and intervene to the people about primary prevention in this regard.

Key word: Knowledge, Stroke, Patient's Attendant

[1]Most Luthy Begum, Nursing officer, Rangpur Medical College Hospital;
[2]Dr. Md. Rafiqul Islam, PhD Researcher, Bangladesh University of Professionals (BUP);
[3]Dr. Md. Azizul Islam, Assistant Professor, Department of physiotherapy, ZH Sikder Women's Medical College and Hospital, Dhaka

Correspondence: Dr. Md. Rafiqul Islam, PhD Researcher, Bangladesh University of Professionals (BUP)

Introduction

Stroke is a serious, life threatening medical condition that occurs when the blood supply to part of the brain is cut off. Stroke also known as cerebrovascular accident (CVA) and cerebrovascular insult (CVI) or brain attack is when poor blood flow to the brain results in cell death. Central nervous system infections, comprising mainly of meningitis and tetanus, accounted for 6.6% and 3% of cases, respectively. The myelopathies were the cause of neurologic admissions in 5.4% with paraplegia and quadriplegia resulting from myelopathies accounting for 5% and 0.4% of the cases.1

Intra cerebral hemorrhage are the second most common cause of stroke, accounting for 10% of hospital admissions for stroke appeared to be the most common neurologic admission and medical death that observed in other regions of the country and a little over one fifths of stroke patients die.2 Stroke is less common in people under 40 years, although it happen. In young people the most common causes are high blood pressure or sickle cell disease. In China, 1.3 million people have a stroke each year and 75% live with varying degrees of disability as a result of stroke.3

Most of the risks factors of stroke such as age, sex, heredity, history of hypertension, smoking, high cholesterol, diabetes, obesity, consumption of alcohol, irregular medication of hypertension and physical inactivity and overall sedentary lifestyle can increase the risk of rupture.4 It was reported that females have a higher risk of rupture than males.5 It was also found that the average annual rupture rate for a single aneurysm was 1.9% compared to 6.8% for multiple aneurysms.6 Stroke accounts for the second highest number of deaths and the third highest number of disability-adjusted life-years (DALYs) worldwide.7

Stroke is the third leading cause of death in the United States. More than 140,000 people die each year from stroke in the United States. Each year, approximately 795,000 people suffer a stroke. About 600,000 of these are first attacks and 185,000 are recurrent attacks. Nearly three-quarters of all strokes occur in people over the age of 65. The risk of having a stroke more than doubles each decade after the age of 55. Nearly one fourth of strokes occur in people under the age of 65.8 Bangladesh trying to develop health care system. Specific management knowledge of stroke is an important part of health care to prevent diseases as well

as to improve or maximize independence in people with disabilities. So it can play an absolute role in preventing stroke and aware the people about stroke which is essential to strengthen health profession.

Methodology

It was a descriptive type of cross sectional study. Non-randomized convenience and purposive sampling method was applied, using a pre-tested, semi-structured and modified interviewer administered questionnaire and face to face interview was performed for data collection from September 2016 to December 2016. Respondents were drawn a total of two departments namely neuro-surgery and neuro-medicine who were attendant of admitted patients in Rangpur Medical College Hospital, Bangladesh. 183 respondents age between 25 to more than 56 years were eligible to attend the interview and completed the questionnaire. Researcher explained the study to the respondents of each individual then invited to participate in the study. Written consent was obtained from each of those replying in the affirmative. Respondents confidentially were protected at all times. Collected data was edited by checking, cleaning and analyzing by using the software SPSS (20.0 version). Proportion was presented by frequency and cross tabulation analysis. The association was found out by using Pearson's chi-square ($x2$) test.

Results

Table 1: Distribution of respondents by socio-demographic characteristics (n=183)

Variables	Frequency	Percentage
Age (Years)		
25-35	16	8.7
36-45	26	14.2
46-55	48	26.2
56+	93	50.8
Mean ± SD	52.81 ± 9.707 years	
Sex		
Male	150	82.0
Female	33	18.0
Education		
Up to SSC	61	33.4
HSC to Graduate	95	51.9
Nursing Science	18	9.8
MBBS and above	9	4.9
Occupation		
Housewife	28	15.4
Service holder	74	40.4
Business	54	29.5
Nurse	18	9.8
Doctor	9	4.9
Monthly Income (BDT)		
< 20,000/-	61	33.4
21,000/- to 30,000/-	53	29.0
31,000/- to 40,000/-	29	15.8
41,000/- to 50,000/-	31	16.9
Above 50,000/-	9	4.9

Table 2: Distribution of respondents by knowledge on stroke (n=183)

Variables		Frequency	Percentage
Meaning of stroke	Cardiovascular disease	145	79.2
	Brain disease	170	92.9
	Nerve disease	81	44.3
	Heart disease	56	30.6
Type of stroke	Ischemic	2	1.1
	Hemorrhagic	87	47.5
	Non- Hemorrhagic	7	3.8
Affected side of stroke	Right side of brain	45	24.6
	Left side of brain	42	23.0
	Both side of brain	37	20.2
Risk factors of stroke	Hypertension	183	100.0
	Diabetes mellitus	132	72.1
	Smoking	142	77.6
	Alcohol consumption	178	97.3

Multiple responses

Table No. 3: Association between sex and risk factor of stroke (Cross tabulation)

Risk factor of stroke (HTN)	Sex of the respondents		Total	Chi-square	p-value
	Male	Female			
1-2 Years	59 (32.2)	22 (12.1)	81 (44.3)		
3-5 Years	50 (27.3)	12 (6.6)	62 (33.9)		
6-10 Years	27 (14.8)	7 (3.8)	34 (18.6)	12.026	0.007
10+ Years	5 (2.7)	1 (0.5)	6 (3.3)		
Total	141 (77.1)	42 (22.9)	183 (100.0)		

Discussion

This descriptive type of cross sectional study was found that 50.8% of the respondents belonged to more than 56 years age, followed by 26.2% belonged to 46-55 years, 14.2% belonged to 36-45 years, and 8.7% belonged to 25-35 years age group with mean age 52.81 ± 9.707 years. Of them 82% were male and rest 18% were female. It was reported according to the level of education from the study that 51.9% had completed HSC to graduate which was followed by 33.4% up to SSC, 9.8% were in nursing sciences and 4.9% were MBBS and above. These findings almost similar to the study on analysis of socio-demographic and clinical factors associated with hospitalized stroke patients of Bangladesh conducted by Hossain AM, 2011.[9]

Study found that 40.4% involved in service, followed by 29.5% involved in business, 15.4% were housewife, 9.8% were nurse and rest 4.9% were doctor. It was also found that 33.4% of the respondents had monthly income as less than BDT 20,000/-, followed by 29% had it as BDT 21,000/- to 30,000/-, 16.9% had it as 41,000/- to 50,000/-, 15.8% had it as BDT 31,000/- to 40,000/- and rest 4.9% had it as above BDT 50,000/-. Study revealed in multiple responses that out of all, (92.9%) meant it was brain disease, 79.2%, 44.3% and 30.6% it were cardiovascular disease, nerve disease and heart disease respectively. Findings reported by type of stroke that 47.5% were hemorrhagic stroke, followed by 3.8% non-hemorrhagic and 1.1% ischemic. It was revealed that 24.6% respondents had knowledge about affected side of stroke and it was right side of brain, 23% left side of brain and 20.2% both side of brain. Study also revealed that 100% of the respondents had knowledge about hypertension which was a risk factor of stroke, 97.3% alcoholism, 77.6% smoking and 72.1% diabetes mellitus was a risk factor. These knowledge based findings are a little bit less than the findings of the study on impact of cerebral microcirculatory changes on cerebral blood flow during cerebral vasospasm after aneurismal subarachnoid hemorrhage conducted by Ohkuma H, 2000.[10] Research revealed the association between gender and knowledge on risk factor of stroke was hypertension. The association was significant where the p-value is 0.007 (<.05) and chi-square value was 12.026.

Conclusion

Stroke cases in Bangladesh have significantly increased in number over the past decades; adverse outcomes from these cases are also rising due to the low number of neurologists and physiotherapist in specialized hospitals in the country. Because stroke poses long-term economic impacts on individuals, families and the country; study findings urge the government to put more emphasis on healthcare development by building more stroke rehabilitation units and tertiary hospitals to prevent stroke occurrence and recurrence. There is a need for repeated national prevalence estimates to further assess the stroke, management, treatment and the including measures of other factors. Bangladesh government needs to emphasize healthcare development to cope with the increasing population density and to reduce stroke occurrence.

References

1. Jain R, Deveikis J, Thompson BG. Management of patients with stunned myocardium associated with subarachnoid hemorrhage. American Journal of Neuro-radiology. 2004; 25(1):126-29.

2. Roger VL, Gon AS, Mozaffar D. Heart disease and stroke statistics 2013 update: a report from the American Heart Association. PMID. 2013; 236-46.

3. Broderick J, Connolly S, Feldmann E, Hanley D, Kase C and Krieger D, et al. Guidelines for the management of spontaneous intracerebral hemorrhage in adults: 2007 update: a guideline from the American Heart Association/American Stroke Association Stroke Council. The Stroke. 2007; 38:2001-23.

4. Flaherty ML, Woo D, Haver BM. Potential applicability of recombinant factor VIIa for intracerebral hemorrhage. The Stroke. 2005; 36:2660-64.

5. Yasui N, Suzuki A, Nishimura H, Suzuki K, Abe T. Long-term follow-up study of un-ruptured intracranial aneurysms. Journal of Neurosciences. 1997; 40(6):1155-59.

6. Stevens F, Moat J. Innovative changes in the management of aneurysms. Australasian Journal of Neurosciences. 1996; 9(3):16-20.

7. Lozano R, Naghavi M, Foreman K, Lim S, Shibuya K, Aboyans V, et al. Global and regional mortality from 235 causes of death for 20 age groups in 1990 and 2010: A systematic analysis for the global burden of disease study 2010. The Lancet. 2012; 380:2095-128.

8. Stroke Statistics. The Internet Stroke Center. Available from: URL: http://www. Stroke center. org/patients/about-stroke/stroke-statistics/

9. Hossain AM, Ahmed NU, Rahman M, Islam MR, Sadhya G, Fatema K. Analysis of socio-demographic and clinical factors associated with hospitalized stroke patients of Bangladesh. FMCJ. 2011; 6(1):19-23.

10. Ohkuma H, Manabe H, Tanaka M, Suzuki S. Impact of cerebral microcirculatory changes on cerebral blood flow during cerebral vasospasm after aneurismal subarachnoid hemorrhage. The Stroke. 2000; 31(7):1621-27.