Awareness about Risk Factors of Stroke in People Visiting Emergency Department of Tertiary Care Hospitals of Lahore, Pakistan

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ABSTRACT

Stroke is the compromised blood supply to the brain leading to increased mortality and morbidity in old patients. Uncontrolled hypertension, uncontrolled diabetes, heart disease and smoking are major risk factors that can lead to stroke. A major burden of disease can be decreased by improving the risk factor profile of the patients. To explore the awareness of population about risk factors of stroke a hospital based cross sectional study was planned among patients of more than 45 years visiting emergency department of tertiary care hospitals of Lahore, Pakistan. This study showed poor knowledge about risk factors of stroke in population and necessitates the initiation of health education programs to improve primary and secondary prevention of disease.
Keywords: Awareness, stroke, emergency

INTRODUCTION

Stroke is a condition that occurs when blood supply to the brain is compromised. This affects the arteries that are present within the brain or leading to brain carrying oxygen and nutrients to the brain matter. When a blood vessel is blocked or bursts a part of brain cannot get blood and dies[1].

Stroke is the second leading cause of death after heart disease worldwide. Its prevalence was 33 million in 2010[2]. Almost 37% people die within one year of stroke and 10% experience a recurrent stroke. Half of the survivors have some disability in daily living and half have either cognitive impairment or dementia[3]. This is the leading cause of preventable disability. Hypertension, diabetes mellitus, heart disease, obesity and old age are strong risk factors of the disease[4]. Burden of these risk factors in Pakistan is enormous, by 2020 Pakistan will be the fourth most populous country in terms of Diabetes, every third citizen with age of 45 years or more is hypertensive. Majority of patients are undiagnosed and those who are diagnosed have uncontrolled hypertension and diabetes either due to the non-compliance on patients` part or poor updated knowledge on physicians' part[5]. The resulting rise in stroke prevalence will significantly increase the economic, social and psychological burden of disease on society and overwhelm the currently available resources for health care.

The burden of disease can only be decreased by either improving the outcome after stroke by providing patients with proven therapies or by implementing good primary and secondary

The objective of study was to evaluate the awareness of population about risk factors of stroke.

MATERIALS AND METHODS

A total of 250 participants were enrolled through a non-probability, convenient sampling method in a hospital preventive measures by improving risk factor profile of

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individuals and population. This study was planned to evaluate the awareness of population about risk factors of stroke based cross-sectional study in population visiting emergency department of tertiary care hospitals of Lahore, Pakistan from March 2017 to June 2017.Community members of age 45 years or more were included in the study. Exclusion criteria were age less than 45 years. Study participants were interviewed by researchers after written informed consent through a pre-designed, pre-tested questionnaire. During interviews, all questions were asked in local language (Urdu/Punjabi) which were later converted to English language for data analysis. Data was entered in SPPS-22 for analysis. Quantitative variables like age were presented as mean and qualitative variables like profession and questions were presented as percentages and frequencies.

RESULT

Table 1: Risk factors of stroke

Risk factors of stroke	n	%age
High blood pressure	197	78.8
Diabetes mellitus	56	22.4
Heart disease	69	27.6
Smoking	78	31.2
Old age	156	62.4
Male gender	98	39.2
Personal history of TIA	100	40
Family history of TIA	86	34.4
Brain aneurysms/ AV malformations	14	5.6
Alcohol/drug intake	56	22.4
Sickle cell anemia	18	7.2
Vasculitis	24	9.6
Bleeding disorders	43	17.2
Lack of physical activity	76	30.4
Overweight and obesity	92	36.8
Stress and depression	26	10.4
Unhealthy cholesterol levels	52	20.8
Unhealthy diet	34	13.6
Use of NSAIDS	20	8
Heart attack	109	43.6
Bypass surgery	113	45.2
Post-menopausal hormone replacement therapy	10	4

A total of 250 participants were included in the study. Mean age was 53.14 years. 34% were housewives/ unemployed, 20% were private workers, 18% had a government job and 28% were doing their own business. A total of 4% were males while 54% of them were females. 51.5% of the them had a monthly income of less than PKR 10,000, 40% had between 10,000 to 50,000 and 8.5% earned 50,000 to 1 lac monthly. 35% of study participants were uneducated, 42% had done matric, 15% intermediate and 8% graduation.22 questions were asked about stroke and its risk factors, only 3% of the population could define stroke properly that it is the disruption of blood supply to brain, 37% confused stroke with chest pain or chest tightness while 60% of respondents opinioned that it was weakness of whole or a part of body.

DISCUSSION

Stroke is a life threating condition that causes disability in survivors and can be prevented by improving the risk factor profile. This study was planned to determine the awareness and knowledge of risk factors of stroke in patients presenting to the emergency department of tertiary care hospitals of Lahore, Pakistan.78.8% of the people knew that uncontrolled hypertension is a risk factor for stroke 22.4% and 31.2% said that diabetes and smoking could be risk factors. 57% 13% and 35% of respondents were aware of hypertension, diabetes and smoking as risks of stroke in a study conducted in The Greater Cincinnati, Ohio respectively[6]. 27.6% said that heart disease could lead to stroke and 62.4% said that prevalence of stroke was more in old age.39.2% had observed that prevalence of stroke is more in males.

In this study 40% people thought that personal history of TIA and 34.4% respondents thought that family history of TIA is a risk factor for stroke.7.2% people said that sickle cell disease and 9.6% reported that vasculitis could increase the risk of developing stroke, this was also documented in another study that sickle cell disease increases the risk of stroke[7]. 22.4% said that alcohol intake increases the stroke incidence[8].17.2% of study population thought that bleeding disorders are a risk factor for stroke. Obesity and physical inactivity are risk factors of stroke[9], in our study 36.8% people said that obesity can lead to stroke and 30.4% said that physical inactivity can alsoincrease the chance of stroke in people with normal blood pressure and sugar levels.

Unhealthy diet and hypercholesterolemia were considered as risk factors for stoke by 13.6% and 20.8% of the population respectively[10]. Depression, stress, use of NSAIDS and HRT was thought to be a cause of stroke by a small segment of our study population.

CONCLUSION

In this study it is evident that knowledge of adult population about preventable risk factors of stroke is poor except uncontrolled hypertension.

RECOMMENDATION

There is an urgent need to develop health education programs to improve the awareness of stroke both at primary and secondary health care levels.

Limitation: The limitation of this study was that the study subjects were approached from a small sect of rural population hence the findings cannot be generalized to the whole rural population.

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