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Knowledge of hypertensive patients on risk factors and warning signs of stroke

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Abstract

Stroke is the largest cause of death worldwide and the primary cause of disability. As a result, it was required to investigate the level of hypertension patients' knowledge of risk factors and warning symptoms. A descriptive cross-sectional study carried out among 200 hypertensive patients who were selected using purposive sampling technique. The tool was constructed with three sections: demographic data, risk factor awareness, and stroke signs and symptoms. The study results show that he total mean of knowledge on risk factors of stroke was 11.73 with the SD of 2.17 and warning signs was 9.61 with the SD of 1.99. The gender, age and level of education had significant relationship with knowledge of the hypertensive patients on risk factors of stroke at p=0.05 level. The study concludes that the majority of hypertension patients had insufficient understanding of stroke risk factors and warning symptoms. Hence, the first priority should be to raise public knowledge of hypertension and support primary prevention in order to reduce the morbidity and mortality related to stroke.

Keywords: Knowledge, Hypertensive Patients, Risk Factors, Warning Signs, Stroke

Introduction

Stroke is a global health issue that contributes significantly to morbidity, death, and disability in both developed and developing countries[1]. After heart disease and cancer, stroke is the third biggest cause of death worldwide and the second major cause of cardiovascular fatalities after ischemic heart disease. According to World Health Organization (WHO)[2] estimates, 17.3 million people died of cardiovascular diseases (CVDs) in 2012, accounting for 31% of all deaths worldwide. An estimated 7.4 million of these deaths were caused by coronary heart disease, whereas 6.7 million were caused by stroke. Contrary to popular assumption, four out of five of these deaths happened in low- and middle-income nations, and men were responsible for four out of five of these deaths[3].

Hypertensive people are more likely to have a stroke; a public stroke prevention campaign should focus on increasing hypertensive people's understanding of the early warning symptoms of stroke and changing risk factors [4]. High blood pressure is thought to be the leading cause of death worldwide, with an estimated 7.5 million deaths (13 percent of all deaths) occurring each year. The greatest major risk factor for all forms of stroke is hypertension. For many years, the link between hypertension and stroke has been established. For the past 30 years, there has been compelling evidence that regulating blood pressure leads to prevention of stroke.

Detecting stroke warning symptoms is strongly intertwined to taking the appropriate steps to seek emergency care as soon as possible. Poor detection of stroke symptoms and risk may reduce motivation to change behaviour and lengthen the time it takes to seek emergency treatment. Stroke prevention, including risk factor identification and management, as well as community and individual approaches to stroke symptoms when they occur, are influenced by community attitudes and awareness. The public's awareness and perception of stroke and its risk factors influences the success of primary prevention efforts and prompt medical intervention following a stroke.

Empirical research indicates that improving stroke-related knowledge can help prevent stroke and reduce pre-treatment delays and disabilities[5, 6]. As a result, it's critical to assess public awareness of stroke risk factors, warning signs, and timely medical care in order to identify knowledge gaps and plan effective educational campaigns. Hence, this study was undertaken to assess the knowledge of hypertensive patients on risk factors and warning signs of stroke because the hypertensive patients have greater risk of getting affected by stroke.

Materials and Methods

A descriptive cross-sectional study carried out among 200 hypertensive patients who were attending the OPDs of two tertiary care hospitals. The samples were selected using purposive sampling technique and the patients who were willing to participate were included for the survey. A literature analysis was conducted to find relevant topics for the questionnaire, and the tool was constructed with three sections: demographic data, risk factor awareness, and stroke signs and symptoms. Internal consistency was measured using Cronbach's alpha test after pilot study with 20 participants of different setting, and it was found to be adequate (r=0.81). The ethical approval from the hospitals and participants' consent was obtained prior to the data collection. The self administered questionnaire which was translated in native language was distributed to the hypertensive patients. The collected data was analysed using descriptive and inferential statistics.

Results and Discussion

The demographic characteristics of the patients, regarding age, it shows that 104 hypertensive patients, (52%) were between 25 to 45 years while 12 (6%) were above 65 years. The participants' average age was 47.1± 8.16, 72% were male and 94% were married. Regarding education, 62% of participants reported to have formal education and 82% had received information related to stroke from family/ friends, social media and health practitioners.

Table 1: Distribution of hypertensive patients Knowledge on risk factors of Stroke

Knowledge on risk factors of Stroke	**n=200**	**[%]**
Hypertension	117	58.5
High cholesterol	89	44.5
Diabetes	98	49
Smoking	125	62.5
Overweight	87	43.5
Lack of exercise	147	73.5
Salty diet	56	28
History of stroke	91	45.5
Heart disease	159	79.5
Alcohol	133	66.5
Non-stroke risk factors Knowledge		
Lack of Sleeping	54	27
Stress	113	56.5
Old Age	97	48.5
Family History	73	36.5
Total mean of knowledge on risk factors of Stroke	11.73 ± 2.17	

According to the table 1, heart disease (n=159, 79.5%) was accurately identified as a risk factor for stroke, followed by lack of exercise (n=147, 73.5%), alcohol Consumption (n=133, 66.5%) smoking (n=125, 62.5%) and hypertension (n=117, 58.5 percent). Sleeping problems were the least correctly identified non-stroke risk factors by the participants, with only 54 (27%) of them correctly identify it. The total mean of knowledge on risk factors of stroke was 11.73 with the SD of 2.17. Similar findings were reported from the study by Fathia et al., (2020)[7] which show s that the knowledge means of stroke risk were 10.73 ±3.53. Hence, it is vital to disseminate the information related to management of hypertension and risk factors of stroke to the people, especially for hypertensive patients, as they are in the high risk population.

Table 2: Distribution of hypertensive patients Knowledge on warning signs of Stroke

Warning signs of Stroke	**n=200**	**[%]**
Double vision	58	29
Dizziness	97	48.5
Problems with speaking	74	37
Vomiting	28	14
Weakness or numbness of face	90	45
Weakness/numbness of one side of the body	94	47
Confusion	70	35
Severe headache	103	51.5
Loss of balance	68	34
Weakness or numbness of arm	108	54
Non-stroke warning signs		
Back pain	49	24.5
Difficulty breathing	62	31
Chest pain	87	43.5
Swollen ankles	51	25.5
Cold fingers /toes	46	23
Total mean of stroke warning signs	9.61± 1.99	

Table 2 shows the distribution of hypertensive patients' knowledge on warning signs of stroke. In this, 108 patients (54%) reported weakness or numbness on one side of the body, while 103 (51.5%) patients told severe headache as one of the most important warning signs of stroke. Vomiting is the warning sign that the participants were least likely to recognize (n=28, 14%), and chest pain, difficulty breathing, swollen ankles, back pain and frigid fingers are described as non-stroke warning signals by considerable number of participants. The total mean of knowledge on warning signs of stroke was 9.61 with the SD of 1.99. The gaps in respondents' understanding of the signs and symptoms of stroke highlight the necessity for healthcare providers to invest sufficient time to teaching their patients about the signs and symptoms of the disease at every clinic visit. This would allow patients to seek treatment sooner rather than later, preventing illness progression and catastrophic complications. Stroke prevention is thought to be aided by knowledge of stroke risk factors, particularly awareness of one's own personal risk[8,9].

Regarding the association with demographic variables, gender, age and level of education had significant relationship with knowledge of the hypertensive patients on risk factors of stroke at p=0.05 level. Other variables did not show any significant association with the knowledge on risk factors ad warning signs of stroke among hypertensive patients. Similar findings were reported in few studies which shows that the education status and gender of the participants were significantly associated with their knowledge on stroke[10,11, 12].

Conclusion

The majority of hypertension patients had insufficient understanding of stroke risk factors and warning symptoms, according to the study. The first priority should be to raise public knowledge of hypertension and support primary prevention in order to reduce the morbidity and mortality related to stroke.

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Declaration of Conflicting Interests

The authors declare no conflict of interest. The funders had no role in the design of the study; in the collection, analyses, or interpretation of data; in the writing of the manuscript, or in the decision to publish the results.

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