(RESEARCH ARTICLE)

A retrospective descriptive study on analyzing knowledge and attitudes of care towards prehospitalization care for Cerebrovascular accident patients.

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Abstract

A Cerebrovascular Accident (CVA) is a neurological disorder of the CNS and has a higher risk of death or a permanent neurological sequel. The incidents of cardiovascular and neurological disease are skyrocketing in developing countries like India. Despite many efforts by the government and many public health activists and experts, it is still higher and may lead to permanent damage to the social structure of the families of patients. A non-experimental retrospective descriptive research design was adapted to find out the knowledge of the primary caretaker/s towards the prehospitalization care of CVA patients at Apollo Hospitals, Kakinada. A total of 203 caretakers were identified. Out of that, 170 participated in the study, 23 were lost to follow-up, and 10 refused to participate in the study. Data was collected using a structural knowledge questionnaire. 20 questions were asked to the patient's relatives for their responses to assess the frequency percentage of knowledge and attitude of caretakers regarding the care of CVA. The Data was analysed using descriptive and inferential statistics (including frequency count and percentage). The study findings revealed that 42.9% assumed that CVA is a bio-infection, and 51.1% believed that CVA primarily involves the heart. Regarding clinical presentation, 41.7% believe that CVA has sudden onset weakness, 40.5% believe that it has sudden onset headaches, and 42.9% are unable to identify that it has numbness in the hands. Finally, early identification and treatment are essential for every CVA patient to avoid devastating lifelong complications. Therefore, it is appropriate that the caretaker or close relative of the patient has knowledge enough to identify CVA.

Keywords: CVA – Cerebrovascular accident; CNS – Central Nervous System; Caretakers; Pre-hospital care; Knowledge; Attitude

1. Introduction

Stroke, or CVA, is classically defined as a neurological deficit due to an acute focal injury of the central nervous system (CNS) by wide vascular causes.

CVA carries a high risk of death. Based on epidemiologic statistics, 15 million people worldwide suffer a new (first time) stroke every year. Of these, around 5 million die and 5 million are left permanently disabled, placing a burden on family and community. [1] Studies are showing that the incidence is higher in middle and lower income countries and showing alarming rise in India [3, 5]. However, there are limited resources on pre-hospitalization care which minimizes delay and is providing appropriate care. So the researcher decoded to conduct on retrospective care, study on analyzing knowledge and attitude of care takers' towards pre hospitalization care for CVA patients from OCT- 2021 – OCT- 2022. The objectives of the study are to assess the knowledge and attitude of the caretakers regarding prehospitalization care for CVA patients.

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To help policymakers improve existing programmes or create new programmes to raise awareness among care providers regarding prehospitalization care.

2. Methodology

2.1. Research Approach

The study utilizes a quantitative approach.

2.2. Research Design

Retrospective and descriptive design

2.3. Population

All the relatives of patients who had CVA

2.4. Sampling Criteria

The initial sample size was 203, of these, 23 were lost to follow-up, and 10 refused to participate in the study.

2.5. Inclusion Criteria

This study included all CVA patients, irrespective of age and gender, who had CVA for the first time and were admitted.

2.6. Exclusion Criteria

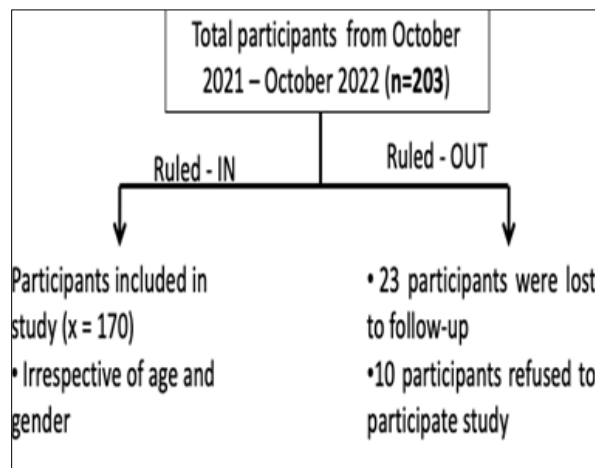This study excludes all patients who were discharged on an out-patient basis or lost to follow up.

Figure 1 Participants included in this body

2.7. Description of the tool

A structured questionnaire was designed to collect the data from the caretakers of the CVA patients. These questions concerned the identification of disease, knowledge of disease, early hospitalization, treatment, & prognosis, and identifying the risk factors. The questionnaire has 2 sections.

2.7.1. Section 1

The demographic variables of the caretakers of the patients with CVA

2.7.2. Section 2

Structured questionnaire to assess the knowledge and attitude of the caretakers of the patient with CVA.

2.8. Data collection method

The details of the CVA patients treated at Apollo Kakinada Hospital from October 2021 to October 2022 were retrieved from the MRD department. The primary caretakers of the CVA patients were interviewed using the structured questionnaire over the phone or personally when they visited the hospital for follow-up. A total of 170 patients' primary caregivers were included in the study. This data was treated with the utmost confidentiality and used for research purposes only. The Data was summarized and reviewed.

2.9. Data analysis

The data was analyzed through descriptive statistics (including frequency count and percentage).

3. Results

The knowledge and attitude of the caretakers of the CVA patients regarding pre-hospital care were analyzed using descriptive and inferential statistics.

Table 1: Frequency and percentage of the demographic variables in the sample

S.NO	DEMOGRAPHIC VARIABLES	FREQUENCY (Total Care Takers)	PERCENTAGE
1	Age in Years		
	20yrs-30yrs	38	22.3
	30yrs-40yrs	65	38.2
	40yrs-50yrs	43	25.3
	50yrs- 65yrs	24	14.2
2	Education levels		
	Illiterate	29	17.0
	Pre school	26	15.5
	High school	63	37.0
	Graduates	52	30.5
3	Gender		
	Male	110	64.7
	Female	60	35.3
4	Marital status		
	Married	118	69.4
	Un married	52	30.6

Table 1 shows that 38.2% of caretakers were middle aged (30 – 40 years), 25.3% of caretakers were 40-50 years, 22.3% were 20-30 years old and 14.2% were 40 to 50 years old. Regarding the education of the caretakers 37% were educated in high school, and 30.5 % were graduates 15.5 % of caretakers from preschool and 17% caretakers were illiterate. Regarding gender, most of the caretakers were male 64.7% and 35.3 % were female. Regarding marital status most of the caretakers (69.4%) were married, and 30.6% were unmarried.

Table 2 The frequency and percentage of the knowledge of the care takers regarding Presentation of CVA

KNOWLEDGE ON DISEASE	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
CVA is a bio-infection and can spread if proper hand washing is not done.	73 (42.9%)	24 (14.1%)	40 (23.5%)	33 (19.5%)
If a person has CVA, It primarily affects heart, so every function will be decreased.	87 (51.1%)	30 (17.7%)	19 (11.2%)	34 (20.0%)
We can prevent CVA with vaccines.	23 (13.5%)	13 (07.06%)	90 (52.9%)	44 (25.8%)
Sudden onset weakness in otherwise well person is main presentation	43 (25.2%)	71 (41.7%)	18 (10.5%)	38 (23.3%)
Frequent headaches is common	51 (30.0%)	69 (40.5%)	21 (12.3%)	29 (17.0%)
If he / she has numbness in hand or fingers of one side	39 (22.9%)	56 (32.9%)	73 (42.9%)	02 (1.1%)
If a person has mouth deviation to one side	60 (35.2%)	28 (16.4%)	19 (11.1%)	63(37.0%)

Table 2 shows that 42.9% strongly agree and 14.1% agree that CVA spreads if proper hand washing is not done, and 23.5% disagree and 19.5% strongly disagree with the same. Nearly half of the caretaker i.e. 51%, believe that CVA primarily affects the heart, whereas 17.7% agree, 11.2% disagree, and 20% strongly disagree with the statement. Nearly half of the carers i.e. 52.9% disagree and 25.8% strongly disagree that CVA can be prevented with vaccines, whereas 13.5 % strongly agree and 7.6% agree with the statement. Out of 170 participants, 25.2% strongly agreed that CVA presents with a sudden onset of weakness, whereas, 41.7% agreed, 10.5% disagreed, and 23.3% strongly disagreed. Some of the participants (40.5%) agreed that a frequent headache is a risk factor for CVA, whereas 30% strongly agreed, 12.3 % disagreed, and 17% strongly disagreed. The number of participants who strongly agree that numbness in the hand or fingers may pose a risk for CVA is 22.9%, whereas 32.9% agreed, 42.9 % agreed and 1.1 % strongly disagreed. Again, 35.2% of participants strongly agreed that mouth deviation to one side is a risk factor for CVA, but to an equal extent, 37% strongly disagreed, 16.4% agreed, and 11.1 % disagreed.

Table 3: The frequency and percentage of the attitude of caretakers regarding the care of CVA patient, risk perception, awareness of basic treatment, and prognosis

What will you do if a person has sudden weakness (unable to move) limbs or founded with any symptoms of CVA				
Attitude of caretakers regarding care of CVA patient, risk perception, awareness of basic treatment and prognosis	Strongly agree	Agree	Disagree	Strongly disagree
8: Rush into any primary health centre for urgent first aid	89(52.3%)	42(29.9%)	29(17.0%)	10(5.8%)
9: Get medicines from pharmacy as it's an emergency	09(5.2%)	13(7.6%)	80(47.0%)	68(40%)
10: Get into a hospital where at least CT / MRI facility available	07(4.1%)	41(24.1%)	52(30.5%)	70(41.1%)
11: Wait and watch if his/her symptoms will be resolved automatically	14(8.2%)	50(29.4%)	102(60%)	4(2.3%)
12: Person having long smoking history or chain smoker commonly get CVA.	28 (16.4%)	43 (25.2%)	65 (38.2%)	34 (20%)

13: If a person is a drinker, possibility is more.	74 (43.5%)	28 (16.4%)	40 (23.5%)	28 (16.4%)
14: Males are more prone to get CVA.	52 (30.5%)	48 (28.2%)	35 (20.5%)	35 (20.5%)
15: Person with prior other problems like fractures of hand / leg	07 (4.1%)	20 (11.7%)	53 (31.1%)	90 (52.9%)
16: Person who is non-vegetarian.	69 (40.1%)	47 (27.6)%	50 (29.4%)	04 (2.3%)
17: Risk of CVA increasing with advancing age.	117 (68.9%)	03 (1.7%)	27 (15.9%)	23 (13.5%)
18: If a person develops weakness due to CVA it will be there lifelong (it cannot be recovered completely)	60 (35.2%)	80 (47.05%)	19 (11.1%)	11 (6.4%)
19: Have you ever heard about window period for CVA?	55 (32.3%)	69 (40.5%)	41 (24.1%)	55 (32.3%)
20: The outcome or prognosis depends on time of presentation	61 (35.8%)	68 (40%)	09 (5.2%)	32 (18.8%)

Table 3 shows that 52.3% strongly agreed that we should rush any patient with CVA symptoms to the primary health centre for urgent first aid, whereas 29.9% agreed, followed by 17% disagreed, and 5.8% strongly disagreed. Majority of participants disagreed (47% disagree and 40% strongly disagree) that one should get medicines from a pharmacy as a medical emergency. Whereas very few (7.6% agreed and 5.2% strongly agreed) agreed that immediate medicine from the pharmacy is needed. 41.1% strongly disagreed with searching for or going to a hospital where at least a CT or MRI facility is available, while 30.5% disagreed, followed by 24.1% agreed, and 4.1% strongly agreeing. 60% strongly disagreed that one should wait and watch for his/her symptoms to get resolved automatically where 29.4% agreed, 8.2% strongly agreed and 2.3% strongly disagreed. All participants, (38.2%) disagreed that people with a long smoking history may have higher chances of getting CVA, followed by 25.2% who agreed, 20% who strongly disagreed, and 16.4% who strongly agreed. 43.5% of participants strongly agreed that CVA is higher in alcohol drinkers, followed by 23.5% who disagreed, whereas equal numbers agreed and strongly disagreed with 16.4 %. Males are more prone; most of the participants (20.5%) strongly disagreed and 20.5 disagreed, whereas 28.2 % agreed and strongly agreed 30.5%. (52.9% strongly disagreed and 31.1% disagreed, whereas 11.7% agreed and 4.1% strongly agreed, in the study disagreed that prior problems like fractures may increase the risk of CVA.

40.1% of participants believed that non- vegetarians would be at higher risk of having CVA, whereas 27.6% agreed, 29.4% disagreed, and 2.3% strongly disagreed. Most believed (strongly agreed, 68.9%) that the risk of CVA increases with advancing age, whereas, 1.7% agreed, 15.9% disagreed, and 13.5% strongly disagreed.

Most of the participants (47.05%) agreed that weakness due to CVA may result in a lifelong sequel. 35.2% strongly agreed, 11.1% disagreed, and 6.4% strongly disagreed.

Out of 170 participants, 32.3% strongly agreed, and 40.5% agreed that they had previously known or heard about the window period for CVA where 24.1% disagreed and 32.3% strongly disagreed.

35.8% of participants strongly agreed that the outcome or prognosis of CVA depends on the time of presentation. Whereas 40% agreed, 5.2% disagreed and 18.8 % strongly disagreed.

To increase awareness among the caretakers regarding prehospitalization, we are conducting awareness programmes once month (every 4th Saturday) at outpatient departments where patients are gathered. We have also created the pamphlets with information regarding the prehospitalization care of the CVA patients, which we are distributing to all the caretakers of the CVA patients.

4. Discussion

Unlike some other diseases, cardiovascular and neurologic disease incidences are increasing in developing countries like India. Despite many efforts by the government and many public health activists and experts, it is still high and leads to permanent damage to the social structure of the family. Based on WHO statistics, most CVA cases are neglected due to delays in recognition and treatment [1, 8]. Based on our study, most of the participants did not even have a minimal level of knowledge to analyze the disease process.

Going through the different sections of responses gathered from the patient's relatives, we get the following information.

4.1. Knowledge on Disease

Most of the respondents think that the CVA is an infection spread by improper hand washing which is incorrect, they also feel that it is a disease of the heart but primarily a disease of the brain. It is heartening to see that most people are aware of the non-availability of the vaccine for CVA.

4.2. Identification of Disease

Most people look reasonably aware of the identification of disease, and they understand the presentation of symptoms like sudden onset weakness, headaches, numbness and mouth deviation.

4.3. Early Hospitalization

Most of the relatives think that the patient should be hospitalized immediately, where all the radiological procedures like CT and MRI are available, and that the patient should get early, proper treatment.

4.4. Treatment & Prognosis

Most of the caretakers are aware of the window period, and the treatment for CVA patients will take much longer than for other disease conditions, and the outcome and prognosis depend on the time of presentation.

4.5. Identifying Risk Factors

The majority of the respondents were aware of the risk factors for CVA. Changing sedentary lifestyle habits like smoking, drinking, and eating unhealthy foods may be beneficial. Vascular changes caused by diabetes mellitus can result in major clinical complications, one of which is stroke. As a result, the risks of getting CVA are increased [12]. Additionally, excessive drinking, substance abuse, and smoking are associated with an increased risk of ischemic and hemorrhagic strokes [13]. Our study was limited to smaller population; therefore, we recommend finding other parameters on disease progression and studying a larger population to help our policymakers to create new policies or revise existing health policies to improve social and healthy lives in society.

5. Conclusion

Early identification and treatment are essential for every CVA patient to avoid devastating lifelong complications. The close relative or primary caretaker is the first person dealing with this episode of CVA and managing the pre-hospital care. They should have proper knowledge and attitude about pre-hospital care, which enhance the prognosis and early recovery of the patient.

Compliance with ethical standards

Disclosure of conflict of interest

The authors declare that there is no conflict of interest in publishing the paper.

Statement of ethical approval

Research proposal was discussed with Nursing Head and DMS and written clearance was taken.

Statement of informed consent

Signed informed consent was taken from all these caretakers who participated in the study.

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