

CHARACTERISTICS OF STROKE TREATED IN THE GERIATRICS DEPARTMENT OF GIA LAI GENERAL HOSPITAL IN 2013

Nguyen Thanh Cong¹, Le Chuyen², Hoang Khanh²

(1) Gia Lai General Hospital, Vietnam

(2) Hue University of Medicine and Pharmacy, Vietnam

Abstract

DOI: 10.34071/jmp.2013.2e.11

Objective: To determine the distribution of the stroke by age group, clinical symptoms, risk factors and outcomes of stroke in the Geriatrics Department of Gia Lai General Hospital in 2013. **Methods:** Conducted a survey, examined and analyzed data of 212 stroke patients treated in the Geriatrics Department of Gia Lai General Hospital from 1/ 2013 to 11/2013. **Results:** Group of stroke patients 70-79 years old accounted for the highest percentage, the proportion of male is higher than that of female. The most common clinical symptoms were hemiplegia, accounted for 94.2%, facial paralytic was 88.2%, speech disorder presented in 83.9%. Hypertension was the leading risk factor of stroke with 86.7%. **Conclusion:** The group of stroke patients aged 70-79 years old accounted for the highest proportion, the most common clinical symptoms were hemiplegia, hypertension still presented the leading risk. Outcomes are different between cerebral infarction and cerebral hemorrhage.

Key words: Stroke, age group, clinical symptoms, risk factors, outcomes.

1. BACKGROUND

Stroke is an urgently medical matter of all countries in the world [6], [8], [9]. Stroke is the third leading cause of death, after cancer and heart disease and is a major cause of long-term disability [2], [7]. Stroke is a severe disease, comes on suddenly and has a high mortality rate [1], [3], [4]. If the patient can overcome the disease, it also leaves the patient long-term disability, needs to be taken care and requires long-term treatment [5]. It costs a lot for family and society.

In the Geriatrics Department of Gia Lai General Hospital, the stroke patients over 60 years old often have chronic diseases. They are serious and need long-term treatment. Therefore, we conducted to find out the situation of stroke in the Geriatrics Department of Gia Lai General Hospital. The purposes of the research:

1. Determine the percentage of stroke with age group.

2. Determine clinical symptoms, risk factors of stroke and outcomes of stroke type.

2. MATERIALS AND METHODS

2.1. Materials

Study on 212 stroke patients treated in the Department of Geriatrics, Gia Lai General Hospital from 1/2013 to 11/2013.

2.2. Methods

Cross-sectional research on 212 stroke patients. Survey clinical futures and risk factors and outcomes according to stroke types. Cerebral CTscan was performed on all the patients in order to diagnose the types of stroke. Data processing by using medical statistics method and software SPSS 15.0.

3. RESULTS

3.1. Stroke with age group and sex

Table 3.1. Age group and gender distribution – adjusted stroke

Age Gender	60-69	70-79	> 80	Sum (%)	P
Male	19	47	43	109 (51.4)	> 0.05
Female	20	46	37	103 (48.6)	
Sum (%)	39(18.4)	93(43.9)	80 (37.7)	212 (100)	
p	<0.05				

Group aged 70 and older accounted for most.

- Corresponding author: Hoang Khanh, email: hkhkhanhqb@yahoo.com.vn

- Received: 7/11/2013 * Revised: 15/12/2013 * Accepted: 27/12/2013

DOI: 10.34071/jmp.2013.2e.12

3.2. Stroke with geography and stroke type

Table 3.2. Geography and stroke type– adjusted stroke

Stroke type Geography	Ischemic stroke n, (%)	Hemorrhagic stroke n, (%)	Sum (%)	p
Urban areas	113 (75.3)	37 (24.7)	150 (70.7)	< 0.01
Rural areas	49 (79.0)	13 (21.0)	62 (29.3)	
Sum (%)	162 (76.4)	50 (23.6)	212 (100)	
p	< 0.01			

Cerebral infarction in urban as well as rural areas are more cerebral hemorrhage.

3.3. Stroke clinical signs and stroke symptoms

Table 3.3. Clinical signs and symptoms

Clinical signs and symptoms		n	%
Clinical signs	Suddenly	143	67.4
	Slowly	69	32.5
Headache, feel dizzy	Ischemic stroke	43	20.3
	Hemorrhagic stroke	98	46.2
Vomiting		32	15.1
Facial paralytic		187	88.2
Hemiplegia	Left	110	51.8
	Right	90	42.4
	Diplegia	12	5.6
Speech disorder		178	83.9
Sphincter disorder		36	16.9

Onset is mainly acute, hemiplegia, speech disorder is common.

3.4. Risk factors of stroke

Table 3.4. Prevalence of risk factors of stroke

Risk factors of stroke	n	%
Hypertension	184	86.7
Tabagism	84	39.6
Diabetes	56	26.4
Alcohol abuse	12	5.6
Heart diseases	26	12.2
Family history (Hypertension, Diabetes...)	14	6.6

Hypertension accounts for the highest proportion.

3.5. Outcomes of stroke type

Table 3.5. Outcomes of stroke type

Stroke type \ Level	Mild	Moderate	Severe	Death	Sum (%)
Ischemic stroke	63 (38.8)	78 (48.1)	21 (13.1)	0	162 (76.4)
Hemorrhagic stroke	12 (24.0)	34 (68.0)	2 (4.0)	2 (4.0)	50 (23.6)
Sum (%)	75 (35.4)	112 (52.8)	23 (10.8)	2 (1.0)	212 (100)

Outcome differences between cerebral infarction and cerebral hemorrhage.

4. DISCUSSION

The rate of stroke increases with age and group of 70-79 years old patients had a higher prevalence of stroke (43.9%) than the patients in the ages of 60-69 and over 80 years ($p < 0.05$ - Table 3.1). We found that the rate of men (51.4%) is higher than that of women (48.6%) ($p > 0.05$ - Table 3.1). However, we did not find the differences between genders in relation to the statistical significance with $p > 0.05$. Our research corresponds with studies of Le Chuyen et al [1]. and Hoang Khanh [3], [4] in which it was found that stroke increases with age. According to Trinh Thi Khanh [2], the patients over 60 had the highest prevalence of stroke. Mihálka et al [8], the average age of stroke was 63.4 ± 12.5 years old. According to Akbar (Saudi Arabia) [6], the average age of stroke was 62 - 66 years old. We only studied at the Geriatrics Department (patients over 60), therefore age of stroke may differ from other researches. According to researches of Rochester,...[7], Hoang Khanh [3], [4], they showed that stroke increased with age and incidence rate was higher in men than in women.

The patients in urban areas had a higher prevalence of stroke (70.7%) than the patients in rural areas (29.3%) ($p < 0.01$ -Table 3.2). In our research, the patients had a higher in ischemic stroke (74.6%) than in hemorrhagic stroke (23.4%) ($p < 0.01$ -Table 3.2). Maybe, if patients had serious stroke, they had an emergency and initial treatment at the Intensive Care Unit Department.

As can be seen in the table 3.3, sudden onset symptoms was over 67.4% with symptoms such as dizziness, headache accounted for 46.2%, these symptoms were higher in hemorrhagic stroke than in ischemic stroke. Hemiplegia was seen 94.2%, facial paralytic in 88.2% and speech disorder in 83.9%. Our research is corresponded with Le Chuyen et al [1], Hoang Khanh [4],...

Risk factors of stroke (Table 3.4): Hypertension is always the first risk factor accounted for 86.7%. The second risk factor is

smoking (39.6%). The study is also corresponded with Hoang Khanh [3], [4], Huynh Van Minh [5], found that a high proportion with hypertension in 77.7%, 63.9% of ischemic stroke and 78.53% of hemorrhagic stroke. According to Fratiglioni's research in 33 European countries, America and Asia, hypertension and arteriosclerosis were the first risk factor of stroke. The study at Limpopo (South Africa) hypertension was 72%[6,7]. Our research corresponds with other researches, hypertension was the first risk factor of stroke.

Based on the table 3.5, the percentage of mortality patients of hemorrhagic stroke was 1.0%. Serious stroke patients were 10.8% and patients with moderate occupancy rate of 52.8%, in this study, we do not include the patient in the treatment process progresses seriously and passed to Intensive Care Unit Department so the rate of mortality was low. Moderate cerebral hemorrhage (68.0%) significantly higher than in cerebral infarction (41.8%), $p < 0.05$. The severe cerebral infarction (13.1%) is higher than cerebral hemorrhage (4.0%), $p < 0.05$. In this study only found a cerebral hemorrhage mortality. This is consistent with studies of Hoang Khanh [3], [4], mortality of hemorrhagic stroke was 79.8%.

5. CONCLUSION

Form the study on 212 stroke patients admitted to the Geriatrics Department of Gia Lai General Hospital in 2013, we have following conclusions:

- The stroke patients group 70-79 years old accounted for the highest percentage, and the rate of male was higher than that of female.
- The most common clinical symptoms were hemiplegia, accounted for 94.2%, facial paralytic was 88.2%, speech disorder presented in 83.9%.
- Hypertension was the leading risk factor of stroke with 86.7%.
- Outcome differences between cerebral infarction and cerebral hemorrhage.

REFERENCES

1. Le Chuyen, Nguyen Hai Thuy, Hoang Khanh, Le Van An, Nguyen Ngoc Minh, Truong Thi Dieu Thuan (2008), "Stroke in Internal department of Hue University of Medicine and Pharmacy", Journal of Practical Medicine, no 596, pp. 344 – 347.
2. Trinh Thi Khanh (1999), "Remark about stroke from 1996 to 1998 at Emergency Department of Huu Nghi Hospital", Journal of Practical Medicine, no 9, pp. 8-9.
3. Hoang Khanh (1995), "Epidemiology of stroke in adult patients at Hue and near areas of Hue", Journal Medical Research and Information, no 5, pp. 24-32.
4. Hoang Khanh (1996), "Stroke in adult patients at Hue Central Hospital in 10 years (1984 – 1993)", Journal of Practical Medicine, no 5, pp. 26-29.
5. Huynh Van Minh et al (1994), "Results of stroke research in 10 years in adult hypertension patients at Hue city", Journal Medical Research and Information of Hue University of Medicine and Pharmacy, no 2, pp. 75-81.
6. Akbar D.H (2001), Clinical profile of stroke: The experience at King Abdulaziz University Hospital, *SQU Journal for Scientific Research Medical Sciences*; 1:35-38.
7. American Heart and stroke Association (2013). Statistical Fact Sheet 2013 update. Older American & Cardiovascular diseases.
8. Goldstein L.B. et al (2001), Primary prevention of ischemic stroke, *Stroke*. 32: 280.
9. Mihálka L. et al (2001), A population study of stroke in West Ukraine. *Stroke*;32:2227.