

STROKE : The Study Of Clinical Profile And Risk Factor In Tertiary Care Hospital.



Medical Science

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ABSTRACT

Background - Stroke is a devastating and disabling cerebrovascular disease with some amount of residual deficit leading in to economic loss. Recent Indian studies have shown a stroke prevalence rate of 471.58 / 1,00,000 population. The objective was to study the clinical presentation and risk factor of stroke in Tertiary Care Hospital.

Method - A total number of 140 stroke cases were studied during the period from Jan 2014 to Dec 2014 who were admitted to department of Medicine in SRMS IMS BAREILLY.

Result - The cerebrovascular strokes are more common in male 67.9% than female 32.1%. Most common age group was 51-60 yrs and most common etiology was ischemic 68.5%. Most common risk factor was hypertension 57.1%, smoking 29.3% and dyslipidemia 27.1%. Most common presentation was hemiplegic 58.6%

Conclusion - The trend of cerebrovascular stroke rises with age, male are affecting more than female, Hypertension is the most common risk factor and most common type of stroke is ischemic. Identification of risk factors for stroke as well as an awareness of the relative importance of each and their interaction carries prime importance in the pathological outcome.

Introduction

Acute ischemic strokes with and initially severe neurologic deficit represent 2-10% of all ischemic strokes,¹ and are associated with poor short-term and long term prognosis. WHO defined stroke as "Rapidly developed clinical signs of focal disturbance of cerebral function, lasting more than 24 hours or leading to death, with no apparent cause other than Vascular origin²". It is a collection of clinical syndromes resulting from cerebral ischemia to an intracranial hemorrhage. In the West, it is the 3rd most common cause of morbidity and mortality.³ Though India was ranked among countries lacking sufficient stroke research data,⁴ some of the recent studies have elucidated the stroke pattern to considerable extent in our country with a prevalence rate of 471.58/1,00,000 population.⁵ Despite many studies prevail regarding stroke, still this major illness remain widely prevalent. Hypertension, Alcoholism, Smoking and Dyslipidemia are common cause of stroke among the elderly⁶, and smoking, alcoholism, increased BMI, diabetes and hypertension are significantly associated with strokes among young people⁷. Ischemic strokes account for 50-85% of all strokes worldwide⁸. Hemorrhagic strokes are due to subarachnoid hemorrhage or intracerebral hemorrhage. They account for 1%-7% and 7%-27% respectively of all strokes worldwide⁸. The Aim of this study was to know the various aspects of stroke which will help physician to deal with deadly & disabler disease.

Aims & Objective

To study the clinical profile and risk factors associated with the strokes in Tertiary care Hospital.

Material & Method

This is a prospective study of one hundred forty (140) consecutive patients admitted at SRMS IMS, Bareilly, between Jan-2014 to Dec-2014 having clinical diagnosis of CVA. All cases underwent a detailed history, Clinical Examination, Serial Neurological Examinations, CT/MRI scan of brain. All pts above age 18 yrs & having clinical & CT confirmed diagnosis of stroke were included and pts below 18, stroke due to Trauma, were excluded. The data obtained were analyzed using SPSS version 21.0 software. Results were expressed in frequencies and percentage.

Observation and Results:

In this study total 140 patients were included. Among 140 patients 95 (67.9%) patients were male and 45 (32.1%) female.

Male to female ratio was 2.1:1. Out of 95 male patients, 63 had infarct(45%) and 32 (22.9%) had Hemorrhagic stroke. Out of 45 female patient 33 (23.6%) had infarct and 12 (8.6%) had hemorrhagic stroke. So, most common type of stroke was ischemic that is cerebral infarction. Second most common type of stroke was hemorrhagic. (Table -1 & Table -2)

Table -1: Sex wise distribution of stroke patients.

Gender	No.	%
Male	95	67.9%
Female	45	32.1%
Total	140	

Table -1

Table -2: Gender wise distribution of different type of stroke

	M	F
Infarct	63 (45%)	33 (23.6%)
Embolic	40 (28.6%)	18 (12.9%)
Thrombotic	23 (24.2%)	15 (10.7%)
Hemorrhagic	32 (22.9%)	12 (8.6%)

Table -2

In this study age of patients ranged between 20-90 years with the mean age of 58±10.2 years. The incidence of stroke were maximum in the age group of 51-60 years, which comprises 55(39.2%) of the total patients as shown in Table -3.

Table-3: Age distribution of of stroke patients.

Age	No. of Patient		T	%
	M	F		
20-30	0 (0)	1 (0.7)	1	0.7
31-40	8 (5.7)	4 (2.8)	12	8.5
41-50	13 (9.2)	5 (3.5)	18	12.8
51-60	40 (28.5)	15 (10.7)	55	39.2
61-70	18 (12.8)	10 (7.1)	28	20
71-80	12 (8.5)	8 (5.7)	20	14.2
81-90	4 (2.8)	2 (1.4)	6	4.2

Table -3

In our study most common clinical presentation was hemiplegia 82 (58.6%), followed by altered sensorium 52 (37.1%), Global Aphasia 47 (33.6%), Seizure 35 (25%) cerebellar sign 15 (10.7%) and Headache 18 (12.9%) as shown in Table-4.

Table -4: Frequency and percentage of clinical features of stroke patients.

Symptoms	No. of Patients	%
Altered Sensorium	52	(37.1)
Hemiplegia	82	(58.6)
Global Aphasia	47	(33.6)
Cerebellar Sign	15	(10.7)
Seizure	35	(25)
Headache	18	(12.9)

Table -4

In our study most common risk factor was hypertension 80 (57.1%). Followed by smoking 41 (29.3%), Dyslipidemia 38 (27.1%), DM 32(22.9%), Past H/o CVA & CAD, 30 (21.4%) & 15 (10.7%) respectively, as shown in Table -5.

Table -5: Risk factor of cerebrovascular disease

Risk Factor	N	%
HTN	80	57.1
Smoking	41	29.3
Dyslipidemia	38	27.1
DM	32	22.9
Past H/o CVA	30	21.4
Past H/o CAD	15	10.7
Atrial Fibrillation	2	1.4

Table -5**Discussion:**

The Mean age of stroke patients observed in our study was 58 yrs which correlated with the study done by Vaidya CV et al⁹ (Mean age 61 years) & Awad SM et al¹⁰ (Mean age 63.6 years) Pinhero et al¹¹ who found mean age 54.85 yrs. The incidence of stroke was maximum in the age group 51-60 yrs which comprises 28.5% of total patient, which closely correlates with the study done by Wadhvani et al¹², UK oha Ob et al¹³ & Maskey et al¹⁴.

The male to female ratio was 2.1:1 which was closely correlates with the study done by Aiyar et al¹⁵, Pinhero et al¹¹, E apen et al⁶.

In our study most common clinical presentation was hemiplegia 82 (58.6%) followed by altered sensorium 52 (37.1%). These findings of our study closely correlated with the study done by P. Chitrambalan et al¹⁶ in which most common clinical presentation was hemiplegia. In our study most common risk factor was hypertension 57.1%, which correlates well with the study done by Abdu-Alrhaman Sallam et al¹⁷. Identification of risk factors for stroke as well as an awareness of the relative importance of each and their interaction carries prime importance in the pathological outcome in both the sexes. In our study second most common risk factor was smoking 29.3% which was comparable to the study by Kaul et al¹⁸ 28%. In our study IIIrd risk factor was dyslipidemia 27.1 % which correlated well with the study done by Khan et al¹⁹, who founded in 19.4% patients.

Ischemic infarct was most common etiology, found in 68.5% of our stroke patients which correlated well with studies done by Aiyar et al¹⁵ in which infarction was seen in 70%, in Eapen et al⁶ 68%. In our study second most common type of stroke was hemorrhagic 31.4%.

Conclusion

Stroke as a disease entity has significantly accelerated the morbidity and mortality in our country. In the West it is the 3rd most common cause of mortality and in our country figures are fast rising to reach such gigantic proportions.. In stroke cerebral Infarction was more common than hemorrhage. Male were more affected than female in both Ischemic on well as hemorrhagic stroke, hypertension was most common risk factor followed by Smoking, Dyslipidemia, DM, past history of CVA, and CAD. Most

Common clinical presentation was Hemiplegia followed by a Altered Sensorium.

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