

# Stroke in young the missing link: An insight into clinical, etiological and radiological profile

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## Abstract

**Objective:** To describe the clinical, etiological and radiological profile of patients with ischemic stroke in young.

**Material and Methods:** 32 patients in the age group of 18-44 years with documented ischemic stroke were included in the study for various relevant investigation. **Results:** He mean age of patients was 32.8+/- 4.52 years with a male preponderance (60%). **Conclusion:** In our series of stroke in young the risk factor profile was significantly different in that usual atherosclerotic risk factors played a relatively minor role in the causation of stroke in this age group.

**Keywords:** stroke, etiology, radiology.

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## INTRODUCTION

Stroke in young is less frequent than in older population. Accurate classification of ischemic stroke is critical for guiding treatment decisions & determining the prognosis of individual patients. Hence study was conducted to look into the insight of clinical etiological and radiological profile of these patients

## MATERIALS AND METHODS

This is a prospective cross sectional study. 32 patients in the age group of 18-44 years with documented ischemic stroke were included in the study. They were subjected to clinical examination, brain and vascular imaging(CT/MRI), cardiac evaluation, testing for

atherosclerotic risk factors, detailed thrombophilia work up and other etiological workup as needed.

## RESULTS

**Table 1:** The mean age of patients was 32.8+/- 4.52 years with a male preponderance (60%)

Language involvement	Cranial nerve involvement	Side of hemiparesis
Broca's Aphasia – 16(50%)	Facial – 29(90.65%)	Lt Hemiparesis – 12(37.5%)
Global Aphasia – 3(9.3%)	Homonymous Hemianopia1(3.12%)	Rt Hemiparesis - 17(53.1%)
		B/L Hemiparesis – 1(3.12%)

**Table 2**

Risk Factors	No Of Pts (%)
Hyperhomocysteinemia	11(34.3%)
Htn, Alcohol	6(18.75%)
Vit B12 Def	2(6.25%)
Diabetes Melitus, Smoking, Infective Endocarditis	5(15.6%)
Apla Positivity, Polycythemia, Ocp, Dyslipidemia	4(12.5%)
Takayasu Arteritis, Factor V Leiden	1(3.12%)

**Table 3**

CT/MRI	No (%)
Mca Territory Infarct	27(84.3%)
Pca Territory Infarct	4(12.5%)
Ica Territory	1(3.12%)

## DISCUSSION

Stroke in young is less frequent than in older population but has a major impact on individual and society. Accurate classification of ischemic stroke is critical for guiding treatment decisions and determining the prognosis of individual patients. However, few studies have focused on etiology and risk factors for ischemic stroke in young adults<sup>1,2,3,4,5</sup>. The current prospective study is focusing on stroke in young patients admitted in BM.C.R.I. In comparison to studies conducted in western countries, a higher male predominance was observed in the current study<sup>5</sup>. The male pre-dominance noted in the current study may at least in part have been attributable to a sociocultural bias in India that manifests as males being more likely to seek treatment at referral centers than females. The most common stroke subtype in the current study is stroke of other determined etiology, and was observed at a higher rate than that reported in previous studies of ischemic stroke in young adults<sup>2,3,4,5</sup>. The most frequent reason for categorizing these patients as having another determined etiology was an incomplete evaluation including thrombophilia work up. The most common cause of stroke of other determined etiology in the current study was hyperhomocystinemia. In a retrospective study of 107 patients, Kristenen and colleagues reported that cardio embolism (32.71%) was common subtype followed by indeterminate etiology (20.5%) and large artery Atherosclerosis (12.14%) The current study has several limitations, the first being the number patients recruited, this study included patients admitted from October 2015 to may 2016. Lastly, this is a hospital-based study and the results may not be generalizable to the general population. Despite these limitations, the current study is focusing on the etiologies and risk factors for

ischemic stroke in young adults in India. Our study highlights the need for aggressive management of traditional risk factors in young adults and also the need for extensive work-up in every patient in order to find correct etiologies.

## CONCLUSION

In our series of stroke in young the risk factor profile was significantly different in that usual atherosclerotic risk factors played a relatively minor role in the causation of stroke in this age group. stroke of other determined etiology was found to be the leading identified subtype of stroke in this age group. Further studies with larger patient population are required to confirm these findings.

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