



## A CLINICAL STUDY ON TOPOGRAPHICAL ANALYSIS OF VASCULAR TERRITORIES IN STROKE WITH CLINICAL AND ETIOPATHOGENESIS

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**ABSTRACT** Stroke incidence is currently increasing in India, compared to Western countries. Mostly it's attributed to risk factors like hypertension, diabetes, smoking, and dyslipidemia and alcohol consumption. Risk factors are poorly controlled with insufficient infrastructure and inadequate public awareness, poor rehabilitation services contributes for increasing prevalence of the stroke with disability. This clinical study focussed on topographical analysis of vascular territories involved in stroke with clinical and etipathogeneis contributing stroke.

**KEYWORDS** : Ischaemic and Heamorrhagic stroke, MCA - middle cerebral artery, ACA - anterior cerebral artery, PCA - posterior cerebral artery

### INCLUSION CRITERIA:

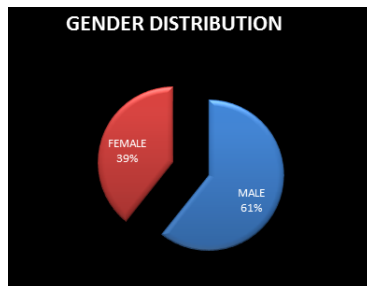
1. Clinical findings suggestive of cerebro vascular accident
2. Adult age group both male and female

### EXCLUSION CRITERIA:

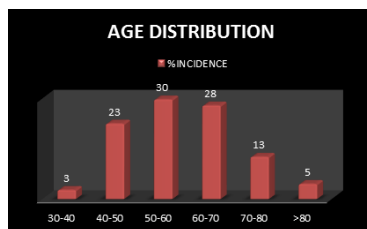
1. Stroke in young adults, pregnancy patients were excluded
2. Patients with known case of malignancy and no clinical features suggestive of cerebro vascular accident were excluded

### RESULTS:

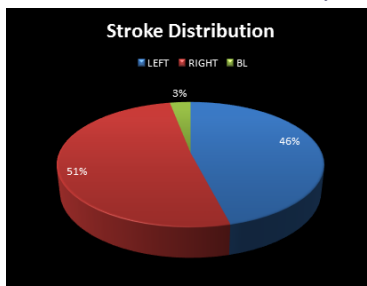
All cases clinical data, radiological imaging and laboratory data were collected. Gender distribution, age distribution, stroke type incidence with gender and vascular territory involved were studied and compiled in following charts.



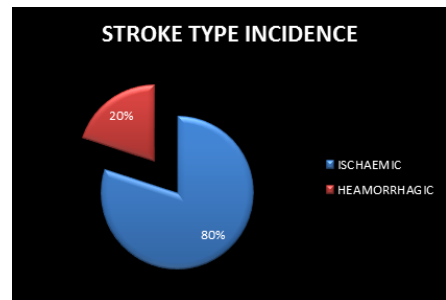
**Fig: 1 Gender Distribution: Male with 61% incidence and Female 39% incidence**



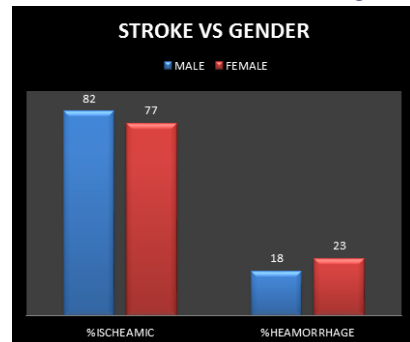
**Fig 2: Age Distribution: 30% incidence in 50-60 years age group**



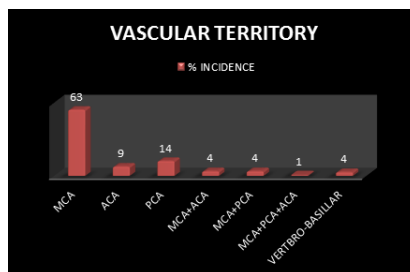
**Fig 3: Left or Right Distribution of Stroke: 51% left side and 46% right side**



**Fig 4: Stroke incidence Ischaemic vs. Heamorrhagic**



**Fig 5: Comparative analysis of stroke vs. gender**



**Fig 6: stroke incidence in different vascular territories**

### DISCUSSION

Males are more prone for cerebro vascular accidents compared to females. It is observed that stroke incidence is 61% in males and 39% in females. Gender distribution might reflect common stressful factors play a role in male preponderance. Highest incidence of stroke observed in 50-60 years age group. 81% of the cases lie in 40 to 70 year age group only with mean age of presentation 58 years. Only 3% incidence observed in 30-40 years age group and 5% incidence in age group >80 years. No significant difference observed with left to right cortical involvement. In 3% of cases bilateral cortical involvement observed. 80% cases are ischaemic stroke and 20% cases

hemorrhagic stroke, indicating that ischaemia secondary to comorbidities like atherosclerosis, smoking, diabetes, hypertension etc. contribute major role in stroke incidence. 82% of males presented with ischemic stroke and 18% with hemorrhagic stroke. 77% of females presented with ischemic stroke and 23% with hemorrhagic stroke. Hemorrhagic stroke is more common in females than males with hypertension. Irrespective of gender, ischaemic stroke is more common. Middle cerebral Artery territory is the single most common vascular territory vulnerable to stroke, followed by posterior cerebral artery. It is observed that 63% of cases involve middle cerebral artery territory and 14% cases posterior cerebral artery territory. In 13% cases two vascular territories involved. Anterior circulation stroke contributes in 96% of cases and posterior circulation stroke in 4% cases

## CONCLUSION

Males are more prone for cerebro vascular accidents compared to females. Gender distribution might reflect common stressful factors play a role in male preponderance. Highest incidence of stroke observed in 50-60 years age group with mean age of stroke 58 years. No significant difference observed with left to right cortical involvement. Hemorrhagic stroke is more common in females than males with hypertension. Irrespective of gender, ischaemic stroke is more common. Middle cerebral Artery territory is the single most common vascular territory vulnerable to stroke, followed by posterior cerebral artery. Anterior circulation stroke is more common than posterior circulation stroke.

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