

Retrospective Study on Complications and Outcomes of Ischemic Stroke

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Abstract:

Stroke is a basic supporter of death and weakness all around the planet. Before current treatment, post-stroke mortality was for the most part 10% in the period. In ischemic stroke, the major obliging objective of reperfusion treatment, including intravenous recombinant tissue plasminogen activator (IV TPA). As at every turn, not altogether firmly established and treated to have antiplatelet drugs, anticoagulant drugs, cell support meds, statins, and so forth. As of late referred to, lifesaving treatment is (RTPA), which it will overall be allowed in something like 3 hours of event of stroke. The conflicting utilization of prescription could incite emerge of entrapments like huge vein breakage, spasmodic stroke, rest issues, confusion, and so forth. Thusly, the patient ought to remain mindful of sustaining balance, low salt affirmation, genuine activity, low fat confirmation, and so forth.

Keywords: Stroke planet, breakage, spasmodic stroke, RTPA, plasminogen activator

1. Introduction

Stroke: A stroke is defined as the clinical syndrome of rapid onset of cerebral deficit lasting more than 24 hours or leading to death with no apparent cause other than a vascular one. Generally, there are three main kinds of strokes:

- Ischemic stroke
- Haemorrhagic Stroke
- Transient Ischemic Stroke

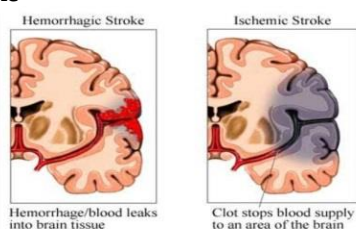
Ischemic Stroke

Fig.1

Ischemic stroke is the most common type of stroke. An ischemic stroke happens when an artery in the brain is blocked. There are two types of ischemic stroke: Embolic Stroke: In an embolic stroke, a blood clot or plaque fragment forms, usually in the heart or the large arteries leading to the brain, and then moves through the arteries to the brain. In the brain, the clot blocks a blood vessel and leads to a stroke.

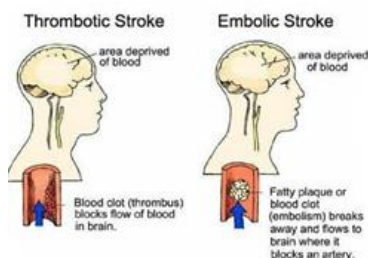


Fig.2

Thrombotic Stroke:

A thrombotic stroke is a blood clot that forms inside an artery that supplies blood to the brain. The clot interrupts blood flow and causes a stroke.

Haemorrhagic stroke

A haemorrhagic stroke happens when a blood vessel in the brain bursts and spills blood into or around the brain. High blood pressure and aneurysms can make blood vessels weak enough to burst. There are different types of haemorrhagic stroke, including's intracerebral haemorrhage and subarachnoid haemorrhage.

Intracerebral haemorrhage

This kind of stroke is caused when a burst blood vessel bleeds into brain tissue. The bleeding causes brain cells to die and the part of the brain that is affected stops working correctly. High blood pressure, also called hypertension, is the most common cause of this type of stroke.

Subarachnoid haemorrhage

In this type of stroke, a blood vessel bursts near the surface of the brain and blood leaks into the space between the brain and the skull (the subarachnoid space). Blood that collects in this space puts pressure on brain tissue and causes blood vessels to spasm. This type of stroke can be caused by different things but is usually caused by a burst aneurysm.

Transient ischemic attack (TIA)

If an artery in the brain or one that goes to the brain is blocked for a short time, blood flow slows down or stops. This can cause a transient ischemic attack, sometimes called a mini-stroke. A TIA's major symptoms include sudden:

- Numbness, weakness or paralysis of the face, arm or leg, usually on one side of the body
- Loss of vision in one or both eyes or double vision
- Trouble speaking or difficulty understanding others
- Loss of balance or coordination
- Severe headache with no known cause

When a TIA happens, the artery either becomes unblocked after a short time or a new path opens up and blood flow is normal.

Symptoms last for a short time and then disappear. A TIA is a serious warning that you might have a stroke.

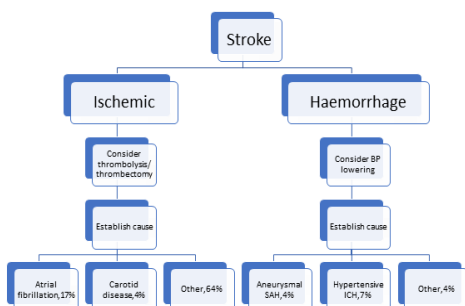


Fig.3

2. Methodology

Study site: The present study was conducted at Srinivasa pinnacle hospital, Hanamkonda, Telangana.

Study design: A hospital based prospective study.

Study period: The study was carried for period of 6 months (May 29, 2023 to November 23, 2023)

Sample size: The study was conducted on 120 patients at single center.

Study criteria:

Inclusion criteria:

- First ever stroke
- Ischemic stroke

Exclusive criteria:

- Patients who have hemorrhagic stroke
- Previous history of stroke
- Patients with traumatic brain injury

Study procedure: The study was initiated at a single Centre by selecting the patients based on inclusive criteria of the study. Patients with more than 12 years are enrolled in our studies who were suffering with Ischemic stroke patients were enrolled in this study based upon the causes, past Medicaid history, social history, diagnosis, treatment and other complications. Our study was used to evaluate post complications by age to age of ischemic stroke.

Statistical method: Statistical analysis was performed using Microsoft office excel to determine the most probability of people affected on the basis of age, gender, locality, comorbidity wise distribution and lifestyle.

Data collection form:

A suitable designed collection data form was prepared for patient which includes demographic details of patient such as age, sex, symptoms at the time of stroke and risk factors were collected. All patients were clinically examined and subjected to lab investigations, causes, diagnosis and medication charts.

3. Results and Discussion

Table.1: Sex Determination

Sex	Frequency
Male	64
Female	56
Total	120

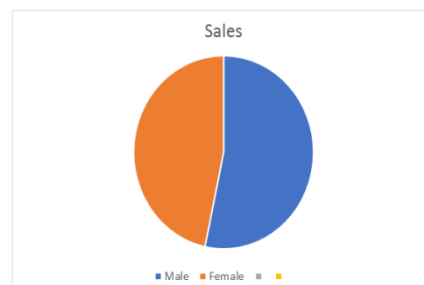
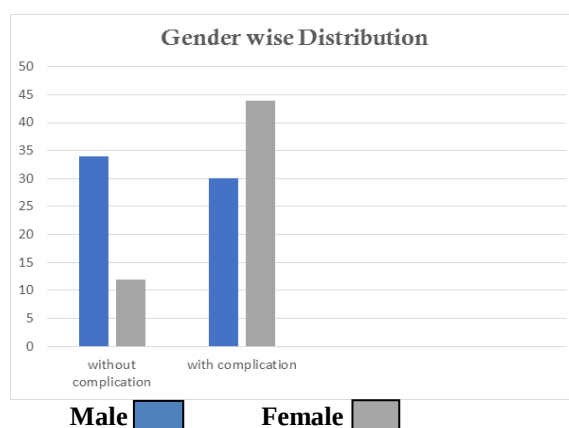


Fig.4: Gender Distribution

Table.2

Sex	Without complication	With complication
Male	34	30
Female	12	44
Total	46	74

Among the 120 cases 74 of them had at least one complication out of which 30 were male and 44 were female. The rest had no complications (34-male, 12-female).



The patients were divided into two age groups, less than 50 years and more than 50 years with 28 and 92 patients in each group respectively. However, there was no statistically associated with regarded to the age group, complications.

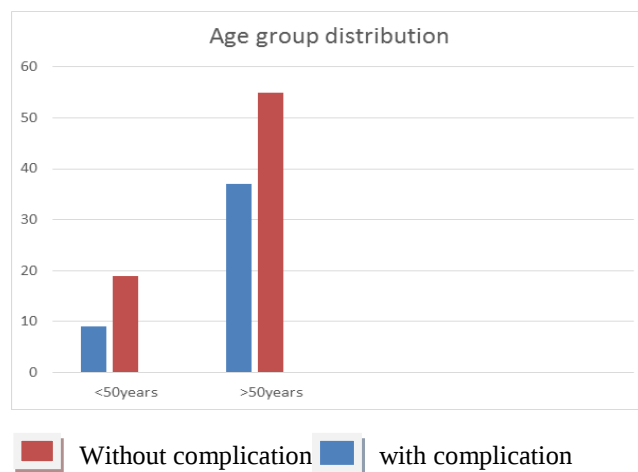
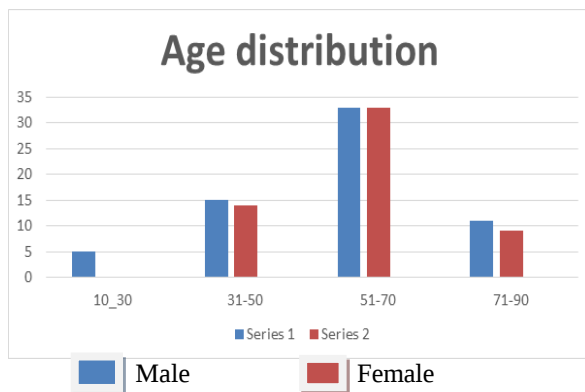


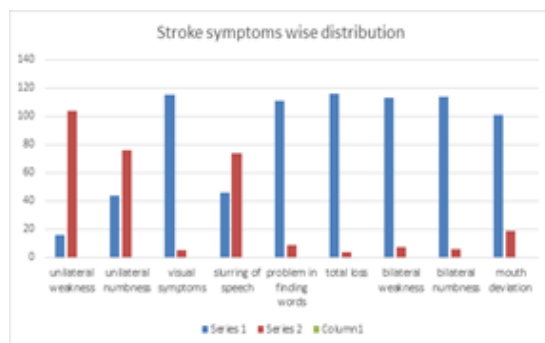
Table.3: Age distribution in years

Age in year	Males	Females	Total
10-30	5	0	5
31-50	15	14	29
51-70	33	33	66
71-90	11	9	20

The age distribution of all the cases is shown in the above table. It ranges from 10-90 years. The mean age of patient was 51 years. Distribution of patient in large groups of 51-70 years was relatively higher than other groups.

**Table.4:** Stroke symptoms associated with complications

Symptoms	Without Complication	With Complication
Unilateral weakness	16	104
Unilateral numbness	44	76
Visual symptoms	115	5
Slurring of speech	46	74
Problem in finding words	111	9
Total loss (mute)	116	4
Bilateral weakness	113	7
Bilateral numbness	114	6
Mouth deviation	101	19

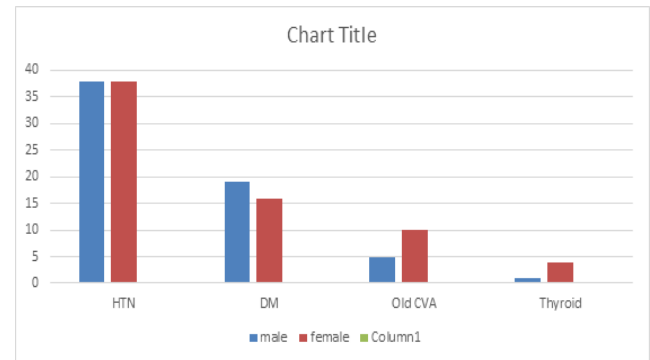


Without complication  with complication 

Table.5: Aetiology wise distribution

	Male	Female
HTN	38	38
DM	19	16
Old CVA	5	10
Thyroid	1	4

A total of 120 cases, 76 of them had hypertensicn, 35 of them had diabetes, 15 were old CVA and 5 were Thyroid.



4. Conclusion

A prospective study sample of 120 patients with stroke is included. According to the study, males arc mostly affected than females. The rate of medical complications was high in patients with ischemic stroke and those patients were found to have a poor outcome. Hence each diagnosis and prompt treatment of these complications is needed in order to improve the outcomes and there by quality of life of patients after stroke. As few patients have comorbidities of hypertensicn, diabetes, these arc major cause for prevalence of disease condition. Antiplatelet drugs and anticoagulant drugs prescribed to these patients followed by statins. As the patients also suggested to monitor for bacterial infections. The study concludes that there is a high risk of recurrent stroke, deep vein thrombosis etc. in stroke patients. The development of newer thrombolytics targeted towards fibrin specificity, rapid onset of action, and shorter half-life can be safe and effective in treating patients with AIS. The development of reversal agents for the newer oral anticoagulants can improve safety of these agents when used in an extended care setting. Additcionally, stem cell-based therapies arc emerging as a new therapeutic approach and as a potential restorative therapy. Technological advances arc transforming neurorehabilitation interventions through BCI, MI, VR, RAT and may offer more promising outcomes.

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