

High Blood Pressure, Hyperlipidemia, Type2 Diabetes with Prior History of Arterial Fibrillation Caused Stroke

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ABSTRACT

The stroke cases are on rise, to know its causes, symptoms & treatment patients have to be studied in detail and get the appropriate result. Stroke is a serious medical condition that can sometimes be deadly. Stroke cases are emerging at a startling rate at the moment. People with specific medical problems are more susceptible to stroke, even though it may afflict anybody. A stroke or brain stroke can be fatal and result from inadequate blood supply to a portion of the brain, according to the Cleveland Clinic. The most common causes of this are cerebral haemorrhage or arterial obstruction. If insufficient blood flow occurs, oxygen-starved brain cells begin to die.

A stroke may happen to anybody, at any age, although certain people are more susceptible than others. Furthermore, beyond the age of 65, the danger rises. Strokes occur commonly in either sex. Strokes are the second largest cause of mortality worldwide. Not only that, but stroke is a leading global cause of disability. The following are a few examples of stroke symptoms

Paralysis on one sides peaking difficulties or loss of speech distorted or double vision (diplopia) inability to coordinate light headedness and vomiting stiff neck personality shift agitation or confusion seizure loss of memory headache loss of consciousness the blood clotting disorder atherosclerosis Heart abnormality (ventricular or atrial septal defect) microvascular ischemia elevated blood pressure tumours of the brain (including cancer)Heart abnormality (ventricular or atrial septal defect) microvascular ischemia elevated blood pressure tumours of the brain (including cancer) etc.

Keywords: MRI, High Blood Pressure, Hyperlipidaemia, Type2 Diabetes, With Prior History of Arterial Fibrillation Stroke

Introduction

Stroke, a cerebral blood circulation disorder, causes stenosis, occlusion, or rupture of intracerebral arteries, manifesting as a one-time or permanent brain dysfunction the mortality rate of stroke is exceptionally high and poses a great threat to one's health [1]. In addition, stroke also exerts a heavy burden on families and society, particularly, a considerable financial burden. According to the 2019 global burden of disease (GBD) research results, stroke is the second leading cause of death in the world [2]. There were 80.1 million cases of stroke and 13.7 million new stroke cases in 2016 worldwide. Age-standardized mortality declined from 1990 to 2016, but the overall burden of stroke remains high [3]. The costs of stroke care are rising, along

with increasing burdens of disability, which provides the impetus for us to shift our research focus to effective stroke prevention measures [4]. Reportedly, 75.2% of stroke-related deaths worldwide and 81.0% of stroke-induced disability adjusted life years (DALYs) were from developing countries. Stroke poses a serious threat to health in these countries and the world.

The Case taken and studied in collaboration with the departments of Neurology and Physiology, Owasi Hospital & Research Centre, Deccan College of Medical Sciences, Hyderabad, Telangana State, India.

Case

A 65 years old male has approached to the casualty of Owasi Hospital & Research Centre, Deccan College of Medical Sciences, Hyderabad, Telangana State, India with a sign and

symptoms of expected stroke and found semi haemophilia and lack of wordings with the mouth [5-9]. A thorough Physical and systemic examinations were done along with certain diagnostic investigations [10]. His blood pressure was found high, MRI of brain is found positive for severe stroke. He has a prior history of Diabetes Mellitus type 2 and Arterial fibrillation.

Table 1: MRI, Blood Pressure, Blood Sugar, HbA1C, Arterial Fibrillation and Lipids Profiles

S.no.	Investigation	Sever Stork Affected Patient
1	Gender	Male
2	Age	65 year
3	MRI	433 - 437.1 (ICD-9-CM code)
4	Blood Pressure	180/100 mmHg
5	Fasting blood glucose	175 mg/dl
6	Hba1c	10.5 %
7	Post Lunch blood glucose	210 mg/dl
8	Arterial Fibrillation	90%
9	Total cholesterol	210 mg/dl
10	HDL cholesterol	65 mg/dl
11	LDL cholesterol	135 mg/dl
12	VLDL cholesterol	62 mg/dl
13	Triglyceride	218 mg/dl

Discussion

Stroke has the characteristics of high morbidity, high disability, high mortality, and high recurrence rate, which seriously affects the quality of life of patients and places a heavy burden on society and families [9]. This study used a prospective cohort study to collect data on 1,650 patients with T2DM and/or HTN in hospital to explore the risk factors relating to new and recurring stroke, aiming to reduce the risk of relapse and disability [11-13]. In this hospital-based, prospective cohort study, the new incidence and recurrence rates of stroke were 12.1 and 26.5%, respectively, in patients with T2DM and/or HTN. Seven factors, namely smoking, abnormal TC, abnormal LDL-C, patients with comorbid T2DM and HTN, CAS, NHISS, and physical inactivity, were independently associated with new stroke among T2DM and/or HTN without stroke history [14]. Additionally, both CAS and NHISS were independently associated with stroke recurrence.

Conclusion

Multimodal imaging provides information that is useful for diagnosing ischemic stroke, selecting appropriate patients for thrombolytic therapy, and predicting the prognosis of ischemic stroke. Only depending on a single or a few parameters may not be sufficient, instead comprehensively combining the information from each MRI sequence (i.e., DWI, FLAIR, GRE, and PWI) and using various mismatch parameters (DWI-FLAIR mismatch and/or PWI-DWI mismatch) may be more helpful in establishing an indication of MRI-based thrombolysis.

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