



PREVALENCE OF MODIFIABLE RISK FACTORS IN RECURRENT STROKE: AN ORIGINAL RESEARCH STUDY IN TERTIARY CARE HOSPITAL

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ABSTRACT **Aim:** To study the prevalence of modifiable risk factors in recurrent stroke in patients admitted to medical wards in Government General Hospital, Vijayawada, Andhra Pradesh, India.

Methods: Detailed history taking was followed for all patients admitted with recurrent stroke in medical wards of Government General Hospital, Vijayawada, Andhra Pradesh, India. 21 patients were included in the study. The frequency of different modifiable risk factors including drug non-compliance have been identified for analysis.

Results: out of 21 patients 15 were males and 6 were females. Regarding modifiable risk factors 66.67% patients were found to be drug non-compliant. 52.38% continued to be alcoholic and smokers. 66.67% were hypertensive and 52.38% patients were diabetic.

Conclusion: Drug non-compliance found to be a major modifiable risk factor for recurrent stroke in addition to hypertension. There is a need to improve stroke rehabilitation measures all over the country to reduce the burden of recurrent stroke and related morbidity and mortality.

KEYWORDS : Recurrent Stroke, Modifiable Risk Factors, Non-Compliance, Hypertension, Secondary Prevention, Rehabilitation

Introduction

Stroke is one of the most common emergencies that present to the Emergency Department. Recurrent strokes are even more fatal and disabling with significant mortality and morbidity compared to new onset stroke. The risk for a recurrent stroke in the first month is approximately 4% and about 12% in the first year after stroke onset [1]. Whereas the, the annual frequency of recurrent stroke after the 1st year is about 4–5% [2]. The risk factors remain the same for a recurrent stroke which include atherosclerosis, heart disease, Diabetes, Hypertension, Dyslipidemias. Addictions to alcohol and smoking further increase the recurrence of stroke. Various therapeutic guidelines have been published to prevent the recurrence of stroke which include anti-platelets, lipid lowering agents, anti-hypertensives and diabetes management. However data on patient education after initial stroke, knowledge of the patient about the risk of recurrence, risk stratification and risk factor handling, drug compliance is limited. This study chiefly focuses on the drug compliance of the patient after initial stroke, risk factor modification like abstinence from alcohol and smoking, and proper management of hypertension and diabetes.

Methods

Detailed history taking was followed for all patients admitted with recurrent stroke in medical wards of Government General Hospital, Vijayawada, Andhra Pradesh, India. 21 patients were included in the study. History taking regarding the modifiable risk factors like drug non-compliance, hypertension, diabetes, smoking and alcohol were assessed in all the patients. Each patient in this group was assessed thoroughly about his/her life style changes in relation to the above said modifiable risk factors. All patients were also investigated with a standard protocol for stroke management. The main focus of our study was to identify the impact of drug non-compliance in the prevalence of recurrent stroke. After identifying all the risk factors in this study group, the frequency of different risk factors were analyzed.

Results

S.No.	Modifiable risk factor	Prevalence
1	Drug non-compliance	66.67%

2	Hypertension	66.67%
3	Diabetes	52.38%
4	Hypertension and Diabetes Combined	33.34%
4	Alcohol	52.38%
5	smoking	52.38%

Discussion

Recurrent stroke after a first episode is common, but the knowledge about etiopathogenesis of recurrent is limited. This study results proves non-compliance to the drugs as a major reason for recurrence of stroke and patient with hypertension had more incidence of recurrence when compared to those with diabetes as co morbidity. It has been reported that the risk for 1st-year stroke recurrence could be reduced by 50% with proper hypertension control [3]. Non- abstinence from alcohol and smoking resulted in recurrent stroke in 52.38% of the individuals in our study. Various reasons for non-compliance include economic constraints, lack of proper knowledge about the disease and risk of recurrence, and lack of proper education of the patient by the health facilities. Initiation of life style modification with regular physical exercise should be advocated. Regular pharmacotherapy for maintenance of hypertension, diabetes and lipid profile help in secondary prevention of recurrent stroke.

The common risk factors for recurrent stroke are quite prevalent and inadequately controlled mainly because of poor public awareness and inadequate infrastructure[4]. Government of India has started the national program for prevention and control of Cancer, Diabetes, Cardiovascular diseases and stroke. Stroke rehabilitation is not well developed in India due lack of personnel[5]. Use of secondary prevention strategies has been reported to result in 80% reduction in the risk of stroke recurrence, vascular events and death[6]. Poor drug adherence is related to adverse outcomes[7].

Conclusion

This study, thus emphasizes on secondary prevention of recurrent stroke with special focus on patient education on risk and modifiable risk factors and making the patient to be compliant to the drugs. Further

studies with larger study population in this area will help to get a better understanding of etiopathogenesis of recurrent stroke and evaluate the drug resistance and the possibilities to prevent or delay a future stroke.

There should be continuous encouragement and support in medication intake. Correcting misbeliefs is as important as providing a convenient drug regimen. Stroke patients with disability and reduced cognition should be given additional care. Hypertension and Diabetes should be controlled at the level of Primary Health Centers to prevent adverse complications.

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