



ASSESSMENT OF LEFT VENTRICULAR DIASTOLIC DYSFUNCTION IN ACUTE ISCHAEMIC STROKE

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ABSTRACT

After hypertension and diabetes, cardiac disease is a significant risk factor for stroke. Cardiac diseases predominantly cardiac failure that can be systolic dysfunction or diastolic dysfunction are the causes of thrombotic atherosclerotic strokes around the globe. It is certainly vital to assess the patient's risk of mortality and morbidity during the incidence of acute ischaemic stroke. Diastolic dysfunction in stroke patients during hospital ICU stay is at increased risk of mortality. This research assesses mortality risk in diastolic dysfunction patients with stroke.

KEYWORDS : Left ventricular Diastolic Dysfunction, Ischaemic stroke, echocardiography

INTRODUCTION

Cardiac disease is a strong risk factor for stroke, ranking third after age and hypertension. In cardiogenic stroke risk, congestive cardiac failure ranks second, with a relative risk of twofold to threefold. As the population ages, the incidence of cardiac failure rises significantly. High mortality is also correlated with cardiac failure, with an estimated complete mortality rate of 15 years for females at 39% and for men at 72%.

We are convinced that LVDD is also a significant risk factor, particularly in hypertensives and elders, contributing to mortality.

AIM OF THE STUDY

The aim of the study is to find the association between mortality rate in acute stroke patients with diastolic dysfunction.

MATERIALS AND METHODS

STUDY DESIGN - Randomised Prospective observational study

Total no of patients included in the study were 100.

Patients selected from ICU and medical ward in SREE BALAJI MEDICAL COLLEGE AND HOSPITAL

Echocardiography done for all the Acute ischaemic stroke patients for diagnosing Diastolic dysfunction.

EXCLUSION CRITERIA-

- Haemorrhagic stroke patients were excluded from the study.
- Patients of Age less than 40 with cardiac diseases were excluded.

RESULTS AND DISCUSSION

LV diastolic dysfunction was graded as

- Normal
- Grade I (delayed relaxation)
- Grade II (pseudo normal filling)
- Grade III (restrictive filling) based on mitral flow velocities and filling times.

DIASTOLIC DYSFUNCTION

42 out of 100 patients had diastolic dysfunction in echocardiography.

20 patients were in the age group between 51-60 years

followed by 16 patients in the age group less than 50 years.

6 patients were above 70 years of age.

The number of men with diastolic dysfunction was more when compared to women in the ratio of 7:5.

There is no statistically significant association between diastolic dysfunction and history of angina, palpitations and symptoms of left heart failure. 25 hypertensive patients had diastolic dysfunction. 12 diabetic patients had diastolic dysfunction. 5 patients with history of C.A.D had diastolic dysfunction. There was no statistically significant association between Diastolic Dysfunction and chest X- ray, E.C.G changes in the patients.

An attempt was made to correlate the clinical parameters of stroke - including severity of stroke, altered mentation, extent of stroke on C.T and mortality with L.V Diastolic Dysfunction. L.V diastolic dysfunction had statistically significant association with mortality. Total of 15 patients died in the study of which 7 patients were having diastolic dysfunction. There was a statistically significant relation between diastolic dysfunction and mortality among acute stroke patients mainly thrombotic stroke. P value was <0.001 indicating co relation.

CONCLUSION

In stroke patients with mortality, the association between diastolic dysfunction was statistically important with p value < 0.001. Since hypertensives of about 25 out of 42 had diastolic dysfunction, the cause of mortality in acute ischaemic stroke patients was indirectly related to hypertension. Hypertensives with diastolic dysfunction in ischaemic stroke in stances are therefore more at danger of death.

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