

ABSTRACT

BACKGROUND

Stroke is one of the leading causes of premature death and disability in India . Diabetes mellitus by virtue of its association with micro and macro vascular disease is an important risk factor in the genesis of stroke due to accelerated atherosclerosis. This study was carried out in Institute of Internal Medicine , Madras medical college ,RGGGH , Chennai a major tertiary care centre.

AIM AND OBJECTIVES

To measure the random blood glucose level within 24 hours of onset of ischemic stroke in both diabetics and in non diabetics and to evaluate the severity and prognosis in relation to hyperglycemia

STUDY DESIGN

This study is a single center prospective observational study.

SUBJECTS

A total of 50 ischemic stroke patients admitted to medical ward of Institute of Internal Medicine, Madras medical college , RGGGH , Chennai fulfilling inclusion and exclusion criteria.

MATERIAL AND METHODS

Random blood sugar levels and HBA1C levels were done within 24 hours of onset of ischemic stroke .The hospitalization details and progression of the patients were followed . Prognostication was done with NIH STROKE SCALE (NIHSS). Statistical analysis was done using SPSS version 16.0 for Microsoft windows.

RESULTS

Among the fifty ischemic stroke patients in our study group , 30 patients had elevated admission blood glucose level and 20 patients had normal blood glucose values. In ischemic stroke patients early mortality rate was 14.8% in hyperglycemics vs 2.07% in euglycemics .The mean NIHSS was 14.5 in hyperglycemics vs 5.6 in euglycemics. Poor outcome was noticed in 38.3% in hyperglycemics vs 3.18% in euglycemics. Our study clearly shows a positive correlation ($r = 0.71$, $p = 0.001$) between admission day sugar level and the outcome of ischemic stroke.

CONCLUSION

The study shows a linear correlation between admission day hyperglycemia and ischemic stroke in its severity , size and outcome. The combined diabetes and stress hyperglycemics are found to have large sized severe stroke and poor functional outcome in the form of mortality and post stroke morbidity. Hence , restoration of normoglycemia should be encouraged along with expert multi disciplinary approach in stroke care units to improve the functional outcome of patients .