ABSTRACT

BACKGROUND AND OBJECTIVES

Among the most frequent causes of morbidity and mortality one of the leading causes is stroke. It is also a cause of morbidity to patients suffering from it with a reduction of quality of life. And after heart disease and cancer is the major cause of death.

Metabolic syndrome as we all know is one of the most prevalent diseases in modern world and a risk factor for a variety of diseases like stroke, coronary artery disease, atherosclerosis and its complication. It is the objective of this study to identify the relation between metabolic syndrome and the severity of stroke and the functional quality of these patients after a period of 60 days using the NIHSS scaling system and the modified rankin scale. The study uses a case control approach with patients with metabolic syndrome suffering from acute stroke on one side and patients without metabolic syndrome suffering from stroke on the other side. The studies also assess other independent indices like age, sex, alcohol consumption, pack years smoked also. Metabolic syndrome is one of those risk factors that are modifiable with life style changes, making it possible to reduce the severity and the functional disability of patients with these simple measures.

METHODS

Patients admitted in general wards of department of medicine, Madras Medical College,Chennai with acute ischemic stroke during the period of april 1st 2016 to September 1st 2016 considering the inclusion and exclusion study.

INTERPRETATION AND CONCLUSION

The significance of age , sex, was not evident between patients with and without Metabolic Syndrome. While systemic hypertension, diabetes mellitus, and HDL levels showed statistical significant correlation with respect to the development of stroke. Hence implying that the components of Metabolic syndrome that is ,diabetes , hypertension, HDL levels do correlate with the incidence of stroke.

The NIHSS scale when compared with both the population , that is those with metabolic syndrome and those without metabolic syndrome, we get a statistical significant data ,in which a large subset of the population presents with severe stroke ,which is measured by a score greater than 21 in the NIHSS scale.

When modified rankin scale was used to identify the functional disability after a period of 60 days which yielded a significant correlation. When different subsets were used in relation to the mRS scale it was well evident that age, alcohol consumption, systemic hypertension, diabetes mellitus, pack years of cigarettes smoked showed significant correlation. Implying that these factors increased both the severity and the functional disability of patients.

One interesting analysis that was obtained was that although the amount of pack years did not show any correlation for the incidence of strokes in patients with and without metabolic syndrome. Once stroke had developed , those with a greater pack years ,had a higher score in the mRS scale indicating that ,the functional disability of smokers with stroke was far more than those with out stroke.

When mean of the mRS scale was calculated for both the control and the case group it was evident that patients with metabolic syndrome showed significant worse outcome than those without metabolic syndrome.

In conclusion metabolic syndrome is an independent risk factor for both the severity and functional morbidity for patients implying the role of lifestyle modification in the management of stroke .

Key Words

Acute cerebrovascular accident , ischemic stroke , metabolic syndrome , NIHSS stroke , mRs scale, diabetes, hypertension, TAG , HDL, results , Outcome , prognosis , functional disability , severity.