

# **SERUM MAGNESIUM AND POTASSIUM LEVELS AT ADMISSION AS PROGNOSTIC MARKERS IN ACUTE CEREBROVASCULAR ACCIDENTS**

## **ABSTRACT**

Magnesium and potassium deficiencies are the most under diagnosed electrolyte abnormality in current medical practice. Dietary magnesium and potassium deficiencies are more prevalent than generally expected and remains to be one of the most common nutrient problem in developed as well as in developing countries. The chronic low levels of magnesium and potassium are atherogenic and thrombogenic thereby disrupting the arterial and cardiac integrity and so is associated with Hypertension, Diabetes Mellitus, Coronary artery disease and Cerebrovascular disease etc.,

### **AIMS AND OBJECTIVES:**

To study the prognostic impact of serum magnesium and potassium levels at admission on intrahospital outcome in patients with acute cerebrovascular accidents. To study the correlation of serum magnesium and potassium levels with the risk factors of stroke such as age, sex, hypertension, diabetes, dyslipidemia and coronary artery disease.

### **MATERIALS AND METHODS:**

In our study 100 patients with acute cerebrovascular accidents who met the inclusion and exclusion criteria were selected from the medical wards at the institute of internal medicine. Serum magnesium and potassium levels were checked at the time of admission and analysed using calorimetric method.

### **OBSERVATION AND RESULTS:**

In our study, it was observed that serum magnesium was low in 56 % of cases and serum potassium was low in 63% of cases of cerebrovascular

accidents with a p value of  $<0.0001$  and  $< 0.19$  respectively. This study also showed a statistically significant relationship of association of systemic hypertension with a p value of  $<0.001$ .

### **CONCLUSION:**

In conclusion, the present study showed a statistically significant correlation between the serum magnesium and potassium deficiency with acute cerebrovascular accidents and its risk factors like systemic hypertension. A statistically significant correlation of mRS values with serum magnesium and potassium values were also observed. Hence if a patient with a risk factor for stroke is found to have low levels of serum magnesium and potassium values during screening prophylactic supplementation with magnesium and potassium can prevent more disability in the persons that will be involved by stroke in future.

### **KEYWORDS:**

Acute cerebrovascular accidents, serum magnesium level, serum potassium level, intrahospital outcome.