

8th European Neurology Congress

September 21-23, 2016 Amsterdam, Netherlands

Value of electrocardiogram and cardiac enzymes in acute ischemic stroke

Hee-Yun Chae and Bong-Goo Yoo
Kosin University, Korea

Background: Cardiac arrhythmias and other cardiac dysfunctions occur in relation with acute cerebral ischemia. This study was undertaken to evaluate the sequential changes of electrocardiogram and cardiac enzymes after acute ischemic stroke, and to evaluate the incidence of cardiac arrhythmias.

Methods: 43 patients with acute ischemic stroke were recruited for this study. Electrocardiogram and cardiac enzymes were checked at 1, 3, 5, 7, 15, and 30 days after onset.

Results: Heart rates were decreased acutely after ischemic stroke and showed maximal decrease at day 3 ($p<0.05$). Heart rates were more significantly decreased in the right-sided lesions than the left ($p<0.05$) and in the supratentorial lesions than the infratentorial ($p<0.05$). PR intervals and durations of QRS complex were prolonged at day 3 and 5 but were not significant. The prolongation of the QTc interval was found in 21 patients (48.8%) and sustained QTc prolongation at day 30 was seen in 16 patients. Compared with controls, patients showed significantly higher incidence of arrhythmias ($p<0.01$). Creatine phosphokinase-MB (CK-MB) was significantly increased at day 5 ($p<0.01$) and lactic dehydrogenase (LDH) was increased at day 7 ($p<0.01$).

Conclusions: In our study, the incidence of neurogenic cardiac abnormalities in acute ischemic stroke was higher than that of previous studies. Abnormalities peaked at days 3 and 5 were nearly similar to control levels at day 30. These periods of peak abnormalities coincided with those of increasing brain edema. Therefore, we postulated that cardiac autonomic controls are also influenced by acute brain edema.

Biography

Hee-Yun Chae has completed his MD from Kosin University College of Medicine and is currently pursuing his Resident Training from Kosin University College of Medicine.

chy4142@naver.com

Notes: