

ABSTRACT

Background: Stroke is the second leading cause of death in the world and has remained the top major killers during the past decade. Many studies prove the benefit of first-line treatment if given within therapeutic time window. But there are inadequate studies to show the benefit towards the cognitive state correlation with the therapeutic time window. Cognitive state has major impacts on quality of life and independence. There are also indirect effects of cognitive impairment on functional recovery after stroke through reduced participation in rehabilitation and poor adherence to treatment guidelines. In this experiment, we are going to investigate the correlation between therapeutic time window and cognitive state in acute ischemic stroke patient, using Mini Mental State Examination.

Objective: To determine the correlation between therapeutic time window and cognitive state using Mini Mental State Examination in acute ischemic stroke patient.

Method: This research used Cohort retrospective study design, 105 subjects are involved. Consecutive sampling method is used. All patient identity will be confidential and represented by code. Onset of stroke and the time given first-line treatment is recorded on medical record. Cognitive state is measured on the day of discharge from hospital by using MMSE. Others variables such as diagnosis of patient, gender, and age are recorded as well. Wilcoxon-Mann Whitney test is used to analyzed the statistics.

Results: The subjects with therapeutic time window <12 hours score a mean MMSE of 25, while subjects with therapeutic time window >12 hours score a mean MMSE of 24. The p-value obtained by Mann-Whitney Test was 0.351, indicated the correlation between MMSE and therapeutic time window is not significant. The confounding variables, age has p-value less than 0.05, indicate there is significant relationship, while gender with p-value exceeded 0.05, shows no significant relationship with the MMSE in acute ischemic stroke patients.

Conclusion: There is no significant correlation between therapeutic time window and MMSE in acute ischemic stroke patients. Further study with larger sample size is recommended.

Keywords: Stroke, MMSE, Cognitive State, Therapeutic Window.