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Points of In-Hospital Delays in Thrombolytic Therapy among Patients with Acute Ischemic Stroke: A Single Center 5-Year Retrospective Study

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Objective:

This study aims to identify the areas and causes of in-hospital delays in thrombolytic therapy in a tertiary health facility in the Philippines. Additionally, this study aims to determine the clinical outcomes of patients who received rTPA using the Modified Rankin Scale (MRS).

Background:

Stroke is a neurologic emergency causing mortality and disability. Intravenous rTPA is a proven therapeutic modality for acute ischemic stroke when given within the time window. As thrombolysis is time-sensitive, guidelines have recommended in-hospital stroke evaluation time benchmarks.

Design/Methods:

Retrospective review of medical records of 42 patients who received thrombolysis from 2014 to 2018 was done to determine the different time intervals. The primary outcome is the average time of thrombolysis. Secondary outcomes were the documented causes of the delays and the clinical outcomes of the patients who received thrombolysis.

Results:

Among the 42 patients, only 1 received rTPA within sixty minutes from arrival. The average time for thrombolysis was 139 minutes. In-hospital delays occur from time to neuroimaging (88.10%) and needle time (97.62%). Factors that contributed to the delays were facilitation of supportive procedures (19.04%), and securing consent for thrombolysis (50%). One patient who received rTPA within 60 minutes had a discharge MRS 4; two patients had MRS 6; and the remainder of the patients had equally good discharge outcomes [MRS 0-2 (47.61%)], and poor discharge outcome [MRS 3-5 (45.24%)].

Conclusions:

This study's data showed that administration of thrombolysis is delayed. Securing consent for this standard of care remains to be an issue causing delays. Although physicians are vigilant in stroke recognition, facilitation of supportive procedures takes precedence over the administration of thrombolysis delaying the actual administration of IV-rTPA. Administration of thrombolysis within 60 minutes did not show any difference on the clinical outcomes of those who received the same intervention beyond 60 minutes of arrival at the hospital.

Keywords— *in-hospital delays, intravenous thrombolysis, stroke timelines, time benchmarks*

Professional Biography

Glenn Anthony Constantino has completed his MD at the age of 26 years from University of Santo Tomas in Manila, Philippines. He is currently undergoing residency training in Neurology at The Medical City hospital located in Pasig City, Metro Manila, Philippines. At present, he is the resident coordinator for the Acute Stroke and Neurosciences Intensive care Units and the resident in charge for matters such as the stroke census and the rapid stroke response team. His fields of interest include Stroke and Vascular Neurology as well Pain Medicine.



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Any Comments: