The burden of stroke on public health services has expanded following the current trend towards elderly society of many countries including Thailand. The current management of acute ischemic stroke (AIS) is to restore the cerebral circulation to the ischemic zone as quickly as possible, in order to rescue reversible brain tissue (penumbra) after an ischemic insult. The more brain tissue is saved, the more satisfactory outcome can be expected. Therefore, recanalization of the thrombotic cerebral artery or cerebral reperfusion targeting the salvageable brain tissue is a major goal to be achieved promptly. Following the many years of IV rt-PA usage, failure of recanalization in large cerebral vessel occlusion (LCVO) is ensued. Mechanical thrombectomy (MT) of cerebral vascular occlusion has taken a major role since the publication of a series of studies of MT therapy for LCVO in 2015.

Nevertheless, routine time-based approach of AIS management is still a major limitation for selection of stroke candidates to undergo this procedure. The 2018 ASA/AHA guidelines for the early management of patients with acute ischemic stroke [1] have been developed to fill the gaps. The roles of emergency medical service (EMS) personnel in pre-hospital diagnosis and prompt initial management at the stroke scene are emphasized. Selection of the most clinically indicated stroke victims for MT is particularly the highlight of these guidelines. The two recent studies to triage the stroke patients eligible for MT have been launched out and referred to.

Both DAWN [2] and DEFUSE 3 [3] trials provide a new trend to select stroke patients suitable for MT with the expectation of favorable outcomes. “Mismatch approach” between either clinical severity and volume of infarction core or ischemic zone and infarction core volume is applied in the studies, respectively under a pre-specified clinical setting. Eventually, it is possible that when the advanced neuroimaging machines are widely accessible, penumbra or tissue-based approach in selection MT-suited stroke cases will replace the former time-based approach.

References

Keywords: Acute ischemic stroke, Mechanical thrombectomy