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Editorial

Stroke Unit in Emergency Department, a Necessity

Samad Shams Vahdati*

Department of Emergency Medicine, Tabriz University of medical science, Tabriz Iran

*Corresponding author: Samad Shams Vahdati, Department of Emergency Medicine, fellowship of neurovascular emergency; emergency medicine research team, Tabriz University of medical science, Tabriz Iran, Tel: + 984133352078; Email: sshamsv@yahoo.com; shams@tbzmed.ac.ir

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Stroke is one of the main causes of constant disability in adults and exists in fourth place in terms of mortality in the USA. Seven hundred ninety-five thousand cases of stroke occur in the USA every year, 610,000 of which are new cases experiencing stroke for the first time [1-3]. Approximately 90% of stroke is ischemic stroke. However, in developed countries only a very small proportion (2-7%) of this patients who might potentially receive recanalization therapies in fact done [4-6].

The effectiveness of recanalization therapies is highly accompanying with the time elapsing from onset of stroke. Therefore treatment of ischemic stroke patients who are potentially suitable for recanalization therapies is a race against time. The appropriate time interval from beginning of stroke in recanalization therapies for ischemic stroke is 3-4.5 hours, the effectiveness of treatment decreases over time, while the NNT value increased over time [7]. Studies have shown that approximately 2 million neurons and 10 million synapses are damaged and die every minute in which a large artery is blocked is untreated in case of ischemic stroke [8].

The slogan 'Time is Brain' is the most essential slogan for prehospital stroke care today and the first hour after stroke is known as the 'Golden hour' [9]. The most important purpose in modern prehospital stroke management is the removal or betterment of factors leading to delays in treatment, also the effective use of diagnostic and therapeutic methods by identifying stroke patients in the 'golden hour' that can be applied before hospital and the provision of the most rapid and effective treatment .

Increase in hospital-acquired medical complications, prolonged hospital LOS, and slower recovery of function as a result of delays in transfer of patients from the ED to the MWs or the SW [10].

The Pre Hospital Acute Neurological Therapy and Optimization of Medical Care in Stroke (PHANTOM-S) study has been designed to display a reduced alarm-to-needle time in Stroke Emergency Mobile (STEMO) compared with the usual care. According to close association between time-to-treatment and outcome in acute ischemic strkoe patients, future studies may then explore which constituents of STEMO play the most important role in the pre hospital stroke care [11].

Recently, a more concentrated multidisciplinary approach to its controlling has evolved, targeting to improve outcome significantly. Dedicated stroke units have been shown to reduce disability, risk of long term institutionalization, and risk of death [12]. Due to the increasing evidence for rapid intervention in stroke care the authors argue that waiting for a bed on a stroke unit ensuing a stroke is unacceptable [13].

Also, they should not be managed in clinically unsuitable areas, where outcome is less favorable. Understanding levels of admissible turn-away and occupancy levels would be main to effectively dimensioning such a unit [13].

Achievement to quickly progressing healthcare technologies is often limited because of absence suitable capacity. owing to Emergency department having excellent communication with EMS and is the front line of hospital and have a good access to any imaging and starting treatment is a best and high potential area to have a stroke unit.

References

1. Jauch EC and Stettler B (2016) Ischemic stroke. Drugs & Diseases, Emergency Medicine.
2. Towfighi A and Saver JL (2011) Stroke declines from third to fourth leading cause of death in the United States: historical perspective and challenges ahead. Stroke 42: 2351-2355.
3. Mozaffarian D, Benjamin EJ, Go AS, Arnett DK, Blaha MJ, et al. (2015) Heart disease and stroke statistics--2015 update: a report from the American Heart Association. Circulation 131: e29-e322.
4. Audebert HJ, Saver JL, Starkman S, Lees KR, Endres M (2013) Prehospital stroke care: new prospects for treatment and clinical research. Neurology 81:501-208.
5. Leys D, Ringelstein EB, Kaste M, Hacke W (2007) Facilities available in European hospitals treating stroke patients. Stroke 38: 2985-2991.
6. Ahmed N, Wahlgren N, Grond M, Hennerici M, Lees KR, et al. (2010) Implementation and outcome of thrombolysis with alteplase 3-4.5 h

after an acute stroke: an updated analysis from SITS-ISTR. Lancet Neurol 9: 866-874.

7. Lees KR, Bluhmki E, von Kummer R, Brott TG, Toni D, et al. (2010) Time to treatment with intravenous alteplase and outcome in stroke: an updated pooled analysis of ECASS, ATLANTIS, NINDS, and EPITHET trials. Lancet 375:1695-1703.

8. Saver JL (2006) Time is brain-quantified. Stroke 37: 263-266.

9. Fassbender K, Balucani C, Walter S, Levine SR, Haass A, et al. (2013) Streamlining of prehospital stroke management: the golden hour. Lancet Neurol 12: 585-596.

10. Akhtar N, Kamran S, Singh R, Cameron P, Bourke P, et al. (2016) Prolonged Stay of Stroke Patients in the Emergency Department May Lead to an Increased Risk of Complications, Poor Recovery, and Increased Mortality. Journal of Stroke and Cerebrovascular Disease 25: 672-678.

11. Weber JE, Ebinger M, Rozanski M, Waldschmidt C, Wendt M, et al. (2013) Prehospital thrombolysis in acute stroke: Results of the PHANTOM-S pilot study. Neurology 80: 163-168.

12. Langhorne P, Dennis M, Hankey G, Weir C, Williams B (2007) Organised inpatient (stroke unit) care for stroke. Cochrane Database Syst Rev: CD000197.

13. Boulton J, Akhtar N, Shuaib A, Bourke P (2016) Waiting for a stroke bed: Planning stroke unit capacity using queuing theory. International Journal of Healthcare Management 9: 4-10.