

Symposiums

SS4.1**Recent Advances in Acute Ischaemic Stroke Management****09:00 Theatre 2**

Recent Advances in Acute Ischaemic Stroke Management

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Three most important evidence-based new advances in acute ischaemic stroke (AIS) management include: (1) introduction of stroke unit; (2) the use of intravenous (IV) thrombolysis; and (3) intra-arterial (IA) mechanical thrombectomy in eligible patients. Efficacy of IV recombinant tissue plasminogen activator (rtPA) in treating patients with AIS presented within three hours from onset was first proven in 1995. Over the following 20 plus years, this practice changing evidence leads to significant changes in hospital systems especially in the emergency work flow logistic; all aim to facilitate its delivery and to shorten the door to needle (DTN) time. Percentage of AIS patients benefited from IV thrombolysis has increased steadily from about 2% to over 15% in some countries. These are the results of enhanced hospital work flow logistics and relaxation of various non evidence-based restrictions on IV rtPA use.

Despite these efforts, there are various restrictions on IV rtPA use and its efficacy in treating patients with large vessel occlusion (LVO) is generally poor. Only about 10% of patients with ICA and 20% to 30% with proximal middle cerebral artery occlusion responded favourably with IV therapy. IA mechanical thrombectomy is targeted to improve clinical outcome in this subgroup of patients. Evidence in 2015 strongly supported endovascular therapy in treating this subgroup of patients. Meta-analysis of the five most recently published randomised control trials showed that IA therapy has an absolute benefit of 20% over IV therapy alone. The average number needed to treat is five for one patient to achieve functional independence. In response to these overwhelming bodies of evidence, the US and EU have updated its AIS management guidelines that advocating IA therapy should be offered to eligible patients with LVO and appropriate measures should be taken to optimise current hospital pathway so that IA therapy can be delivered promptly.