



## A Proposal for a Future Comprehensive Approach to Ischemic Stroke

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### Editorial

According the “2018 Guidelines for the Early Management of Patients with Acute Ischemic Stroke” there are multiple studies evaluating fibrinolytic therapy and mechanical thrombectomy, alone or in combination, have demonstrated substantial cost-effectiveness of acute stroke treatment across multiple countries [1]. The introduction of mechanical thrombectomy expanded the therapeutic window up to 6 h after symptom onset. In a meta-analysis published in 2016, it was demonstrated that 46.0% patients randomized to endovascular treatment, plus IV (Intravenous) thrombolysis when eligible, reached a good disability outcome (mRS=0 to 2 at 90 days; OR=2.35) compared to 26.5% of the control group, who underwent IV (Intravenous) thrombolysis or no treatment [2]. After the publication of the DEFUSE and the DAWN studies the therapeutic window for mechanical thrombectomy was opened up to 24 hours after stroke onset in very well selected patients [3,4]. That is clear that with the mechanical thrombectomy is possible to recanalize the obstructed artery. Some clinical trials using the new generation stent retrievers, have yielded recanalization rates as high as 85% in AIS with large vessel occlusion, and recanalization is positively associated with favourable clinical outcome and increased survival rates in acute ischemic stroke [5]. But for recanalization to translate into positive outcomes, adequate collaterals must delay the infarction of tissue until recanalization is achieved [6]. But not always recanalization is followed by reperfusion, as the small arteries will remain occluded related with a Downstream Microvascular Thrombosis (DMT), and the recanalization of these small arteries will need the use of intra-arterial thrombolysis to ensure the reperfusion at micro circulation level [7-9]. And in this context, when the reperfusion is ensured, probably it could be a new chance to use neuroprotective drugs, allowing these drugs to reach the area where their action could be effective. In the following figure I show my proposal for this future most comprehensive approach to ischemic stroke (Figure 1).

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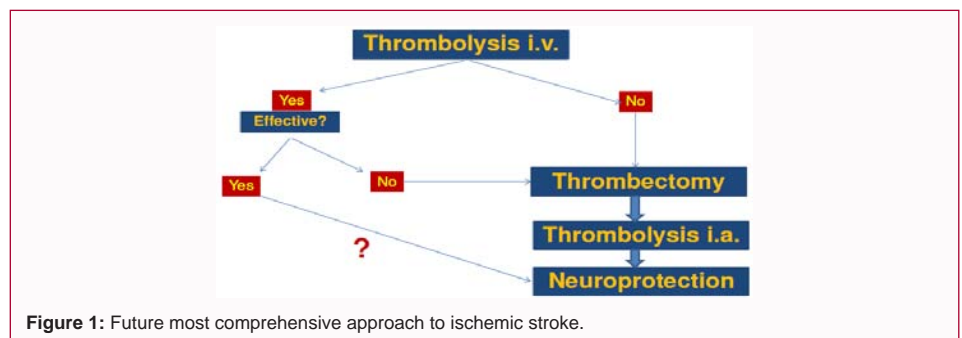


Figure 1: Future most comprehensive approach to ischemic stroke.

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