Should we treat distal occlusions with EVT?

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Abstract

Most of the Guidelines recommend endovascular recanalization in patients with acute ischemic stroke due to large vessel occlusions up until 6 hours after symptom onset, considering large vessel occlusion distal internal carotid artery (ICA), or proximal Middle Cerebral Artery (MCA), M1.

Before the randomized trials, in 2014, several studies have shown that distal occlusions were more benign in their spontaneous evolution, without any recanalization treatment, than large vessel occlusions, and that patients with initial NIHSS ≤8 and distal occlusion had good clinical outcome, independently of recanalization status. Some other studies comparing mechanical thrombectomy and i.v. thrombolysis, in the periphery of the M2 region, have shown that i.v. thrombolysis alone was superior to endovascular treatment in achieving a good outcome. More recently, data from the first randomized trial of thrombolysis in patients with mild ischemic stroke and no clear disabling deficit (PRISMS trial) show no evidence of benefit of tissue plasminogen activator (tPA) and an increased risk for symptomatic intracerebral hemorrhage in this population.

One of the possible reasons for that superiority of the conservative treatment in the distal occlusions, is that benign natural history, for the less symptomatic patients. A second reason could be the higher risk of complications pointed by several metaanalysis compared to the large vessel occlusions treatment, more easily accessible and easy to navigate. This higher risk has been shown as much with stentriever as with aspiration.

While Metaanalysis of randomized trials (HERMES collaboration) favoured endovascular treatment across all site of occlusions, the question of benefit with more distally located occlusions in the M2 MCA segment is only partially addressed because randomized trials had very few patients with more distally located occlusions in the M2 MCA and do not have enough power to fully confirm benefit or harm in these patients. We probably should avoid treat that patients with mild symptomatology and distal occlusion.