The new stroke code protocol—a metropolitan inter-hospital collaboration

Elsa Azevedo

1Neurology Department, Centro Hospitalar de São João, Porto, Portugal
2Department of Clinical Neurosciences and Mental Health, Faculdade de Medicina da Universidade do Porto, Portugal

Once the time window for acute stroke revascularization treatments is narrow, a finely tuned stroke code strategy is mandatory to achieve good functional neurological results. In 2015, new trials on mechanical thrombectomy lead to new European recommendations (ESO, 2015) on acute stroke treatment, in addition to the already established intravenous thrombolytic treatment. While thrombolytic treatment can be provided in many hospitals that have computed tomography and a stroke team/unit, mechanical thrombectomy requires specialized neurointervention teams, which are available mostly in tertiary hospitals.

Aiming to provide thrombectomy treatment to a larger population, a metropolitan inter-hospital collaboration now allows a continuous availability of this treatment (24h/7d). The pre-hospital emergency medical service delivers the suspected stroke patients (according to FAST – face, arm, speech, time) to the nearest hospital with a stroke team/unit in a 6-hour window after symptom onset. At these hospitals, thrombolysis may be administered, when indicated, within 4.5 hours of symptom duration.

Whenever a large artery occlusion is suspected, it is diagnosed with non-invasive imaging, whenever possible. If this is the case, and the patient is not recovering with intravenous thrombolysis or has contraindications for this treatment (e.g. anticoagulation), the on-call neuroradiologist is contacted and the patient is sent for endovascular treatment up to 6 hours after symptom onset.

Patients with unknown time of symptom duration are evaluated with multimodal imaging and treated accordingly. As the treatment time window for acute basilar artery occlusion is not well established, an individualized decision usually takes place, taking in consideration the clinical and imagiological potential for reversibility.

Most importantly, the decision to undertake mechanical thrombectomy is made jointly by a multidisciplinary team comprising, at least, a stroke physician and a neuroradiologist.