Cornerstones of fast and efficient diagnostic and therapeutic decisions in acute ischemic stroke from ER notification to mechanical thrombectomy

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Intravenous thrombolysis and mechanical thrombectomy rates do not meet the epidemiological burden of acute ischemic stroke disease especially in countries in transition. The time window is narrow for both therapies. Minimizing in hospital delay and making beneficial therapeutic decisions is the means to maximalize the effect of the acute stroke treatment. Implementation of known fast stroke chain models and repeated analysis of the workflow is the key to eliminate the in-hospital delay. Now the function of the stroke physician is not to identify the few patients who can be treated with thrombolysis but to find the few who has real contraindication of therapy. Practically all patients who don’t have any general bleeding risk and who has potentially limiting symptoms should get intravenous thrombolysis. The optimal choice of imaging modalities should help to get the maximum information about the patient, to identify the patients who are eligible for mechanical thrombectomy and to avoid delays. The reason of low annual mechanical thrombectomy rates in many countries may be the limited access to neurointervention centers, lack of acute vascular imaging, strict use of manual scoring of early ischemic signs which is prone to high interrater variability and it has ambiguous prognostic value, and choice of secondary transportation. The presentation will provide details about how to set up fast and efficient stroke chain, how to find all the eligible patients for intravenous thrombolysis and intra-arterial treatment utilizing optimal brain imaging and making good therapeutic decisions.

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