Tenecteplase Versus Alteplase Before Endovascular Thrombectomy: EXTEND-IA TNK

Purpose: For patients with ischemic stroke (onset 0-4.5h) and major (large) vessel occlusion who are eligible for thrombolysis, to evaluate increases in major vessel cerebral reperfusion for thrombolytics given *before thrombectomy* at the time of the initial angiogram by comparing tenecteplase, a genetically modified tPA, to the current standard, alteplase.

Trial Design: Randomized, controlled, prospective, blinded, multicenter, investigator-initiated trial. N = 202. Patients with onset of acute ischemic stroke of 0-4.5 hours and scheduled for endovascular therapy were randomized 1:1 to receive either tenecteplase 0.25 mg/kg vs- alteplase 0.9 mg/kg before thrombectomy. Bolus administration.

Primary Endpoints: substantial reperfusion on the initial catheter angiogram before thrombectomy

90-day f/u	Reperfusion	Favorable outcomes – early neurological recovery P=0.66	Symptomatic intracerebral hemorrhage P=0.99
Tenecteplase	22%	72%	1%
Alteplase	10%	69%	1%

Tenecteplase doubled pre-thrombectomy perfusion compared to alteplase and improved functional recovery at 3 months in these ischemic stroke patients. Currently, tenecteplase is not FDA approved.

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