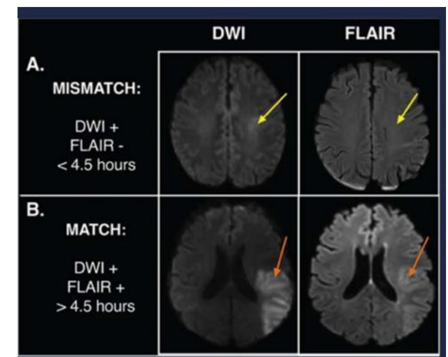
Acute Stroke

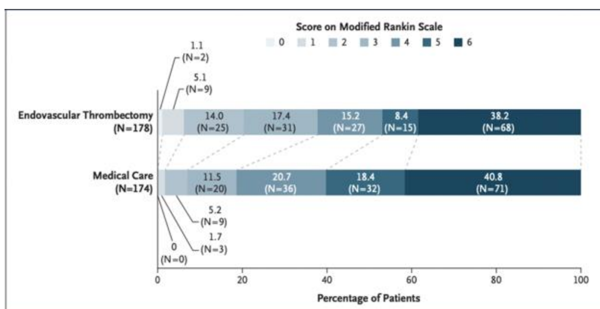
Rapid Clinical Updates
Society of Hospital Medicine

Practice Gap

Context: Stroke is the 5th leading cause of death; main stroke are large vessel occlusion, 80-90% ischemic
Current: There are rapidly changing guidelines, need to quickly get patients appropriate treatment to reduce the risk of long-term disability. The Modified Rankin Scale (mRS) is a 6-point scale that measures the degree of disability after a stroke.
Reperfusion Therapy[1]: IV thrombolysis (tPA) within 4.5 hours of symptoms, Alteplase, and Tenecteplase.
Use what is available at your institution: Tenecteplase is a rapid IV Bolus, unlike 1h for Alteplase, not yet FDA approved for stroke, but many use, and shown to be safe
Before TPA: Vitals (BP < 185/110), FSG, head CT in 15-min of arrival, < 4.5h, know TPA contraindications



Avoid: categorizing patients into "cryptogenic stroke", and find out the cause to get appropriate treatment
Cutting Edge: What if time of stroke onset is unknown? Safe to give tPA?
Use MRI: findings evolve in time: positive diffusion-weighted imaging (DWI) bright signal and a negative FLAIR sequence can detect stroke onset in 4.5 h and safe and beneficial to give tPA[2].
Mechanical thrombectomy: recommended in 24 hours of symptoms especially large vessel occlusions in the anterior circulation, "Drip and Ship"



Even if a large area infarct, large vessel occlusion send patients for thrombectomy: Earlier clinical trials excluded pts with large stroke Large trials (SELECT 2, ANGEL-ASPECT) randomized to stroke thrombectomy or conservative management: Lower levels of disability with thrombectomy at 90d[2,3]
Thrombectomy criteria Pre-stroke mRS 0-1, Internal Carotid or MCA occlusion, M1 > M2/M3, NIHSS ≥ 6, ASPECTS ≥ 6
24h post thrombectomy: No antiplatelet or anticoagulation

TIA and Minor Stroke

Context: TIA: ischemia WITHOUT infarct of brain, spinal cord, or retina causing transient neurologic deficits.
Minor Stroke: infarction of brain, spinal cord or retina with low NIHSS
Current: DAPT for 21-90 days if NIHSS ≤ 3, higher bleeding risk > 21 days
Cutting Edge: Initiate within 72 hours of symptom onset, start in 7d, LOAD: 324mg/300mg, continue 81mg/75mg

Atrial Fibrillation

Current: Cause 5-15% strokes, 5x higher risk more disability, consider implantable devices with unknown etiology
Current: Initiate therapy with DOAC in 4-14 days, DOAC for NVAF, even in BMI > 40, no DOAC for undetermined stroke
Cutting Edge: No indication to switch agents or add antiplatelets with repeat stroke[4,5]

References:

1. Menon BK et al.. *Lancet* 2022 Jul 16; 400:161.2.
2. Thomalla G et al.; WAKE-UP Investigators. N Engl J Med. 2018 Aug 16;379(7):611-622. 3.
3. Sarraj A et al. *N Engl J Med* 2023 Feb 10; 4.
4. Huo X et al. Trial of endovascular therapy for acute ischemic stroke with large infarct. *N Engl J Med* 2023 Feb 10; 5.
5. Ip et al, Neurology 2023;101:e358-e36, Fox K et al *AMA Netw Open.* 2020;3(2):e200107.

Last Updated October 2024