Treating CVA in the ED

AHEC "Time is Brain" 2014

1. Thrombolysis is time dependent. Outcomes are directly proportional to how quickly TPA can be given.

BMJ 2014;348:g3429 doi: 10.1136/bmj.g3429 (Published 30 May 2014)

Table 2| **Outcomes measured by score on modified Rankin scale (mRS) of treatment in patients with stroke after treatment with tissue plasminogen activator (rtPA) in observational analysis compared with clinical trial data**

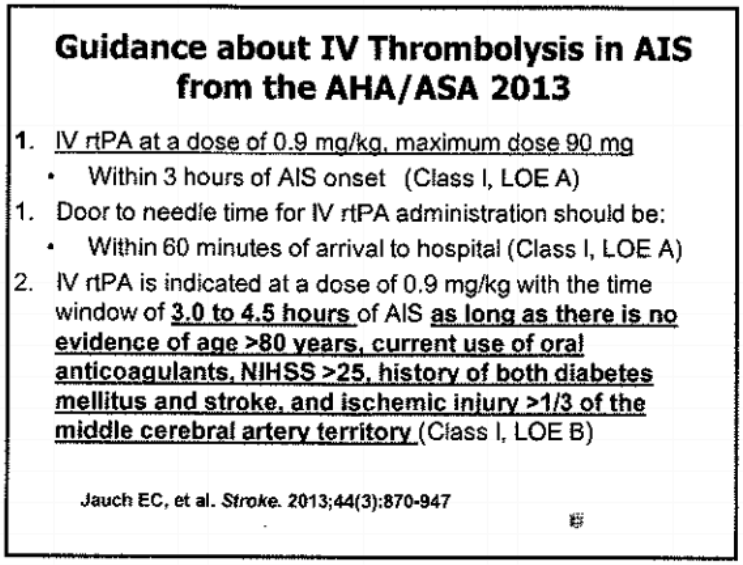
	Present observational analysis			Pooled analysis of clinical trials[4]			
				No (%) with mRS score 0-1 at 90 days			
Time from onset to treatment (mins)	No (%) with mRS score 0-1 at discharge after intravenous rtPA*	Adjusted OR† (95% CI)	NNT for mRS 0-1	Intravenous rtPA	Placebo	Adjusted OR‡ (95% CI)	NNT for mRS 0-1
0-90	378/1245 (30.4)	2.49 (2.12 to 2.92)	4.5	67/161 (41.6)	44/151 (29.1)	2.55 (1.44 to 4.52)	4.5
91-180	1464/4838 (30.3)	1.86 (1.71 to 2.02)	6.4	127/303 (41.9)	91/315 (28.9)	1.64 (1.12 to 2.40)	9.0
181-270	370/1230 (30.1)	1.26 (1.08 to 1.46)	18.0	361/809 (44.6)	306/811 (37.7)	1.34 (1.06 to 1.68)	14.1
>270§	172/721 (23.9)	1.25 (1.01 to 1.55)	18.6	215/575 (37.4)	193/542 (35.6)	1.22 (0.92 to 1.61)	21.4

2. "Drip and Ship" - When you accept a TPA patient from an outside hospital, you accept all the responsibilities for caring for that patient from that point forward. Blood pressure management and TPA dosing are frequently not done well, and mobile transport should have protocols in place.

3. All members of the treatment team should have NIHSS (stroke scale training) to facilitate communication about the patient's decision.

4. Only head CT, glucose, and +/- coags needed prior to TPA.

5. TPA 3.0-4.5hr has benefit but there are multiple additional exclusions.



6. BP in TPA must be < 185/110 and recommended agents are labetalol, hydralazine, and cardene.

7. Neurosurgery never cuts TPA bleeds so does TPA therapy actually need neurosurgery backup?

8. TPA bleeds are treated with cryo and platelets based on consensus recommendation.

9. Consider TPA in mild or improving symptoms if residuals symptoms would be very disabling. Speech, etc.

10. Do not use TPA in someone who is on a novel anticoagulant.

11. Treating mimics such as migraines and conversion d/o for some reason has very low rates of complications.

12. Last four trials of endovascular therapy vs IV TPA - no better than systemic TPA therapy

Recent Endovascular Trials

"No Better Than IV tPA"

1. IMS III: *Broderick JP et al. NEJM 2013;368:893-903*
2. SYNTHESIS: *Ciccone A et al. NEJM 2013;368:2433-2434*
3. MR-RESCUE: *Kidwell CS et al. NEJM 2013;368:914-923*
4. SWIFT PRIME