

Abstract of the month

PsychOSocial effecTs Of aCute stroke thrombolysIS programs on neurologists and Emergency physicians: A proSpective comparativE cohoRt (POST ‘OC IS EASIER) study.

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BACKDROP: Tissue plasminogen activator (tPA) is rumoured to be of benefit as a primary intervention for stroke victims — at least for the 12 or so who didn’t die abruptly from cerebral hemorrhage. It remains unclear whether tPA improves patient outcomes,¹ but compelling anecdotal evidence suggests that stroke thrombolysis programs improve physician outcomes.* Our hypothesis was that tPA, used as a primary emergent therapy for stroke, would have a profound beneficial effect on the mental well-being of neurologists, but only a mild transient euphoric effect on emergency physicians (EPs). **METHODISTS:** This was a prospective comparative cohort study. Group A consisted of 300 randomly chosen neurologists — 9 more than the number of patients in Part 1 of the NINDS trial.² Group B consisted of 4 EPs (2 without valid ACLS certification) who were vigorous proponents of stroke thrombolysis. Both groups were subjected to several tests measuring psychosocial well-being. Our primary outcome measure was the Beck Depression Index before and 24 hours after tPA use.

RESULTS: In the neurologist group (A), all markers of cognitive and psychosocial function improved following administration of tPA. Feelings of self-worth increased dramatically, and self-assessed Beck Depression Index scores plummeted by 89% ($p < 0.0001$). Reflex hammer stroke velocity, a validated physiological marker of mania in neurologists, increased by 27% (CI -59%–350%), and the number of patients deemed areflexic fell to 2.3% (CI -40%–700%).† EPs were profoundly depressed about their income levels and “off the scale” on the Beck Depression Index. Also, they were unfamiliar with the operation of reflex hammers, hence unevaluable on both of the primary outcome measures. Instead, they were assessed using a simpler dichotomous neurological outcome measure that scored 1 point for “brain activity present” and 0 points for “still working shifts.” For this key outcome, 1 of the 4 EPs scored 0 and the other 3 were dropped from the study because they couldn’t afford to miss work and attend the follow-up sessions.

Divorce rates decreased by 8% in the neurologist group but did not change in the EP group, since all were previously divorced. The number of EMGs performed by neurologists on hemiplegic parkinsonian patients being evaluated for bruxism was reduced by 87%, and asthma death increased by 10-fold in the ED, indicating a marked change in the pathology prioritization index (PPI) for both groups. Table 1 shows how study subjects performed on the self-image assessment test, where they viewed standardized silhouettes and chose the one that best portrayed their self-image at the time of testing.

In the automobile paired-brand test, in which physicians identify “What brand of vehicle do you drive and what brand will you purchase as a replacement?” the highest-ranking neurologist pairs were “Volvo 240 station wagon/Jaguar X-type” (before tPA) and “Lam-

* The original NINDS secret raw data will soon be studied for the eleventh time by a United Nations Committee led by Pr. J. Lenzer and J. Hoffman, but that’s another story.

† Unfortunately, this arm of the study was terminated after several blunt injuries to the chest and genitals were experienced as a result of vigorous patient knee jerks.

‡ A condensed version that can be pasted on the back of a credit card is also available.

Table 1. Outcomes of the self-image assessment test

	Neurologists, %		Emergency physicians, %	
	Before tPA	After tPA	Before tPA	After tPA
Silhouette chosen				
“A God walking the Earth”	–	16	–	1
A cardiologist	2	52	1	–
Bill Clinton	6	18	1	3
A neurosurgeon	18	9	3	35
A neurologist	54	4	6	29
An emergency physician	16	1	11	27
A cosmetician	4	–	32	5
A busker	–	–	7	–
A Norwegian Vole	–	–	5	–

* $p < 0.00000003$ for before–after comparisons in both study groups.

† 34% of EPs preferred the characters on *ER* (and regretted Dr. Green’s death).

borghini Countach/Ford Expedition Eddie Bauer Behemoth model” (after tPA). None of the EPs recognized these cars, but 1 identified the following pair: CMC Ninja Turtle roadster/Rocky Mountain Vertex. Two of the EPs plan to upgrade their handlebars and rear suspension, while the third is considering new wrist guards.

PUDDING ALL TOGETHER: Acute interventions are rare in neurology. In fact, it is a sad truth that the pre-1995 version of the “Washington Manual” (*Manual of Neurological Therapeutics*) was only 3 paragraphs long.‡ Lenzer’s upcoming NINDS raw-data re-analysis may or may not show that tPA benefits stroke victims; but irrespective of any potential patient benefits, our study shows that stroke thrombolysis programs have profoundly improved the confidence, self-image, mood, quality of life, libido and general health of neurologists — more so than exercise, weight loss, smoking cessation, frequent intercourse, or hypertension and diabetes control. Sadly, thrombolysis programs did not improve the spirits of EPs, who are encouraged to keep working and read more humorous books.

Competing interests: Dr. Vadeboncoeur had some interest to compete in NHL, but lost it at 11 y.o. after being hit cowardly by his neighbour. Being an American, Dr. Brewer doesn’t have much interest to compete; he already won.

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REFERENCES

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