

## Translational stroke: a rapidly expanding area!

Stroke is so disappointing a disease for both neurologists and patients. In most cases, the effective managements are lacking. We prescribe aspirin, statin, and anti-hypertension treatment. A significant statistic difference in favor of these therapies can be achieved in clinical trials with large sample size, but their effects are often not observed for an individual. Recombinant tPA thrombolysis can reverse neurological deficits in some patients within hours, but only few patients have chance to accept tPA treatment due to the short time window.

How could we understand stroke practice and improve it? Looking back to stroke research history, we can clearly see the important role of neuroimaging. Only when CT came into being, can tPA be selectively given to ischemic stroke, not to cerebral hemorrhage. We can also see the important role for ideal organization of stroke care. When the guideline is widely accepted and stroke teams are widely set up, stroke mortality and occurrence have decreased. But they are only near the core of stroke treatment. An effective treatment strategy is to make a high percentage of the patients recover and go back to normal life as soon as possible. Therefore, current 20 years have not been the key time of stroke revolution.

What shall we do? First, the “peri-core work” is our job. We have to wait and prepare for the “core” treatment. The neuroimaging technique and stroke care organization remain the points. When translated to practice, they can improve the quality of stroke care step by step. Second, stroke science requires a revolution, from animal stroke to human mimic stroke, and then translated to stroke practice. The “peri-core work” will finally contribute to the core work which is always from the revolutionary concepts based on stroke science.

In this issue, several fields of translational stroke are covered, including imaging, stroke care organization, and basic science. I believe the areas of translational stroke are expanding rapidly, faster than ever. And I guess another issue of *Annals of Translational Medicine (ATM)* for translational stroke will be completely different within 5 years. That is really what I am glad to see.



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