Adding Efficiency to Effectiveness

Starting with the landmark MR CLEAN experience, trial after trial has shown mechanical thrombectomy to be a highly effective treatment for strokes due to emergent large vessel occlusions (ELVO), making it unquestionably the standard of care. This efficacy is supported by an increasing body of evidence and several sets of multispecialty guidelines, including the January 2018 publication of new American Heart Association/American Stroke Association guidelines, which call for the early management of patients with acute ischemic stroke and substantially expand the window for mechanical thrombectomy in selected patients.

And yet, there is still much progress to be made to deliver what we as a community are capable of.

With the primary means of therapy now established, the current challenges comprise inefficiencies in our stroke systems of care—triaging and transporting patients to the most appropriate center as quickly as possible. Additional hurdles include variability in emergency medical services (EMS) training and protocols in recognizing ELVO patients and differences in stroke care practices by state and region.

The good news is that efforts toward standardization and improvement are now focal across stroke care communities. Stroke treatment practices can be impacted by differences of state to regional to local levels. To start our issue, Mahesh V. Jayaraman, MD, and Ryan A. McTaggart, MD, provide a step-by-step approach as to what a neurointerventionalist can do to improve stroke care in his/her region—from the angiography suite to patient triage. At the local level, Daniel Wei, BS, and Johanna T. Fifi, MD, focus on the unique challenges of treating ELVO in a large city, specifically how to utilize stroke transfer models to improve onset-to-treatment times for stroke patients.

Level 1 trauma centers can provide us with a roadmap on triaging and delivering care to stroke patients at the regional level. James L. West, MD; Kyle M. Fargen, MD; and J Mocco, MD, highlight the areas of trauma care that can be adopted to improve regional stroke care and reduce door-to-intervention times. Mobile stroke units are another solution to improving stroke care, with prehospital evaluation and initiation of treatment (if necessary) occurring while the patient is in transit to the hospital. M. Shazam Hussain, MD; Ken Uchino, MD; and Andrew Russman, DO, offer evidence on why more health systems should consider adopting mobile stroke units, even with some higher costs, to help reduce time to treatment.

Next, Natalia Perez de la Ossa, MD; Sònia Abilleira, MD; and Marc Ribo, MD, take a look at the impact of drip and ship versus direct ship stroke care models and discuss the RACECAT study, which aims to investigate the use of a prehospital triage system to determine whether a patient is better off going directly to the endovascular-capable stroke center or to the closest stroke center geographically. Then, Joe Holley, MD, provides his perspective on the current state of EMS systems and the challenges involved in standardizing prehospital stroke care.

In our first Ask the Experts feature, Mayank Goyal, MD; Aquilla S. Turk, MD; Michael Froehler, MD; and Tudor G. Jovin, MD, weigh in on how ASPECTS (Alberta Stroke Program Early CT Score) affects their treatment decisions for patients with ELVOs. We then provide an update on the Get Ahead of Stroke Campaign and the new mobile app that was launched in October.

Next, we change course to touch upon aneurysms, with a review of the treatment of blister aneurysms by Parampreet Singh, MD; Arati Patel, BS; and William J. Mack, MD. Then, in our second Ask the Experts feature, Philip M. Meyers, MD; Randall T. Higashida, MD; Adam S. Arthur, MD; Laurent Pierot, MD; and Italo Linfante, MD, discuss which advances in technology, technique, and treatment they'd like to see for cerebral aneurysm care.

Interventional treatment options continue to expand for treating stroke and will be imperative to improving patient outcomes in the future. ◼

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