Next Horizons in Neurointervention

With seemingly unprecedented consensus continuing to mount in support of rapid revascularization for ischemic stroke patients, the field of neurointervention finds itself at welcome crossroads. Most stakeholders agree on the big picture, which enables us to explore applications into patient subgroups and rise to the greater challenge of optimal care delivery via stroke systems of care.

Similarly, I have been heartened to see our field approach new technologic developments in our aneurysm treatment capabilities with a natural enthusiasm but also a healthy environment of cautious evaluation. It can be easy to overlook the fact that we are still in relatively early generations of technology and experience, both of which continue to grow.

With this eye toward responsible progress in mind, we have invited some of the most experienced neurointerventional experts to share their insights on the present and the future of this exciting field.

Expeditious treatment is one of the primary keys to achieving the best possible outcomes in acute ischemic stroke care, but various bottlenecks can emerge and cause delays. Madhav Sukumaran, MD; Donald R. Cantrell, MD; Sameer A. Ansari, MD; Michael Hurley, MD; Ali Shaibani, MD; Matthew B. Potts, MD; and Babak S. Jahromi, MD, examine recent studies on some of these prehospital and preprocedural bottlenecks for large vessel occlusion (LVO) strokes and provide strategies to overcome these challenges and optimize stroke care.

Patients with mild stroke and associated LVO also present unique challenges to optimal stroke care. With this in mind, Gabor Toth, MD, evaluates the available data on the safety, efficacy, and feasibility of treating this patient population with medical and/or endovascular therapy. Then, Jay N. Dolia, MD; Raul G. Noguiera, MD; and Diogo C. Haussen, MD, evaluate the data on mechanical thrombectomy for large core strokes. Even in more straightforward cases, there are still countless decisions and technical considerations. Benjamin Atchie, DO; Ian Kaminsky, MD; and Donald Frei, MD, focus on the important step of crossing the clot, sharing insights on how to cross acute LVOs, with an emphasis on revascularization and avoiding complications.

Next, in our Ask the Experts feature, we asked Blaise Baxter, MD; Ronil V. Chandra, MD; Mayank Goyal, MD; and Ansaar T. Rai, MD, what they consider to be the biggest unanswered question in ischemic stroke care.

We then looked at another technical challenge: treating the wide-necked cerebral artery aneurysm. Examining this, Matthew J. McPheeters, MD; Kunal Vakharia, MD; Stephan A. Munich, MD; and Adnan H. Siddiqui, MD, profile the evolution and progression of neurointerventional treatments for this morphologically challenging aneurysm.

To close out our feature coverage, Reade De Leacy, MD; Gal Yaniv, MD; and Kambiz Nael, MD, address the evolving standards of cerebral aneurysm follow-up, shedding light on the optimal follow-up frequency and imaging modality type.

In addition to the latest in neurointervention, we also share continuing coverage of emerging data regarding the safety of paclitaxel in peripheral artery disease applications.

We are grateful for the time our authors have invested and hope you find these articles beneficial in your practice. ■

Guilherme Dabus, MD, FAHA
Guest Chief Medical Editor