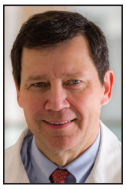
Next on the Neurointerventional Horizon

SNIS President Richard P. Klucznik, MD, discusses the society's focus on stroke awareness and readiness, therapeutic advancements, aneurysm care, managing burnout, and much more.



What is your single biggest goal as current President of the Society of NeuroInterventional Surgery (SNIS), having received the baton from Adam Arthur, MD, at the annual meeting in July 2019?

My single biggest goal is to continue the work of Dr. Arthur and other past presidents to raise stroke awareness and be an advocate for patient care. Our society is the leader in treating acute stroke. We are growing our relationships with other worldwide societies, such as the European Society of Minimally Invasive Neurological Therapy, and continuing to grow the *Journal of NeuroInterventional Surgery* as the preeminent place for publishing research papers.

For those not already aware of the Get Ahead of Stroke program, how would you summarize the initiative's goals, its progress to date, and the road still ahead? What are the most challenging hurdles in achieving these goals?

Get Ahead of Stroke is an advocacy campaign with the mission to change stroke systems of care and ensure that every patient with a severe stroke gets the care needed to survive and thrive. This means changing stroke care protocols in each state so that patients with severe strokes can be brought directly to an appropriate facility with trained specialists who can deliver the care they need. The campaign has made great progress and has improved stroke care policy in Arizona, Florida, Ohio, and Tennessee; Colorado and Virginia have passed stroke care resolutions as well.

The road ahead is to continue the work in more states and keep advocating for the lives of patients. One large hurdle is that each state has different systems of care, and we have to individually affect change in each one. This takes time, which is one thing stroke patients do not have.

Since the initial class of trial data supporting the use of mechanical thrombectomy for ischemic stroke was released, the indications for treatment have continued to broaden, particularly the extension of the time windows—all supported by level 1 data and subsequent guideline updates. What do you believe is the next horizon to be judiciously explored in the delivery of this therapy?

The next horizon may be neuroprotective agents to help the brain survive the initial insult and further extend the window. Work is being done on stem cell research to repair damaged brain with intra-arterial injection. Of course, there are always new devices emerging to retrieve clots faster and go more distal into the anatomy to treat patients whom we may not be able to at present.

There is increasing buzz surrounding radial access for neurointervention, including a dedicated session in the main theater at SNIS 2019. Do you think neurointerventional radial access is ready for prime time? What advice would you share for those interested in adding radial access to their practices?

Radial access is here to stay, and it is certainly ready for prime time. Cardiologists have been using radial access for a long time, and we have lagged. For routine angiograms, it is certainly being used effectively and is appropriate for some interventions that may not require larger-bore catheters. It is useful in acute stroke situations for some access depending on the anatomy and age of the patient.

Artificial intelligence (AI) used in the diagnosing, triaging, and communication of stroke care is also on the rise. What role do you see these platforms playing in stroke systems?

AI is already being used for diagnosing stroke with the Rapid (iSchemaView) and Viz.ai (Viz.ai, Inc.) platforms, which quickly diagnose emergent large vessel occlusions and send notifications to a large number of practitioners. Work is being done with robotics that can be used by practitioners to remotely treat stroke once access is achieved, but that is a bit further down the line.

How have the successful outcomes of mechanical stroke removal affected the prominence of SNIS as a specialty, particularly regarding its growth and relationships with other neurologic societies?

We are the preeminent society in the United States, and our membership outside the United States continues to grow. We are pleased to work closely with other neurologic societies, such as the Congress of Neurological Surgeons, American Association of Neurological Surgeons, and Society of Vascular and Interventional Neurology. At the same time, we continue to expand our relationships with European and Asian societies, all to benefit patient care worldwide. We hope neurointervention will be recognized as its own specialty in the future.

Although stroke intervention has recently dominated the headlines, the progress seen in aneurysm treatment in recent years is also considerable. How do you predict the capabilities for cerebral aneurysm treatment will change in the near future?

The capabilities for aneurysm treatment continue to grow with technologic advances through engineering. The growth of flow diverters (especially for smaller vessels) and easier deployment is exciting. More importantly, the use of intrasaccular devices for aneurysm treatment may follow the introduction of the Woven EndoBridge device (MicroVention Terumo). This will be the future for new devices to come.

Where do you see the biggest need for innovation in aneurysm care?

The biggest need for innovation is in vessel wall imaging. This may help us determine which aneurysms need to be treated, which can be treated conservatively, and in the case of multiple aneurysms in the face of subarachnoid hemorrhage, which have ruptured.

Research led by Kyle Fargen, MD, was recently published and presented at the 2019 SNIS annual meeting, showing that more than half of surveyed SNIS members had symptoms of burnout.[1] What can be done at the society level to ensure the health of its members in this regard?

Burnout will continue to be a concern as our members face the wave of new patients who can be treated for stroke. Appropriate stroke triage to centers with an appropriate number of trained doctors to handle the call schedule, changing to a shift work model instead of 24 hours on call per physician, and the use of robotics for remote stroke treatment could help with work-life balance. We do need the appropriate number of stroke surgeons to handle the burden—but only those surgeons who are adequately trained with proper experience, so that we can help our patients and not hurt them. ■

1. Fargen KM, Arthur AS, Leslie-Mazwi T, et al. Survey of burnout and professional satisfaction among United States neurointerventionalists. J Neurointerv Surg. 2019;11:1100-1104.

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