EDITORIAL

Acute stroke intervention

Louis J. Kim, MD

Department of Neurosurgery, University of Washington School of Medicine, Seattle, Washington

AFTER a long prodromal period, it appears that acute stroke intervention has at last entered its “golden age.” The convergence of key elements—stroke awareness, patient access, device development, and interventional expertise—has forged a new standard of care for patients with acute stroke worldwide, allowing neurosurgeons and neurointerventionalists to deliver meaningful and repeatable outcome improvement. To borrow from Peter Thiel, the well-known Silicon Valley venture capitalist, and his recently heralded book describing disruptive technologies in entrepreneurship, we have gone from “zero to one.”¹

The next phase in this epoch will be systematic refinements of these key elements en route to subsequent disruptive technologies. Toward this end, in this special issue, we present to our readership with great interest the paper “Application of emerging technologies to improve access to ischemic stroke care” by Vuong et al.² The authors delve into the patient access and technology-related components of care. Implementation of mobile stroke treatment units (MTSUs) across a variety of metropolitan areas is cogently reviewed. Data from these prehospital MTSUs are preliminary, with mixed reviews, and the ability to efficiently triage the patient with acute stroke to the proper level of care may be the key benefit. However, a major limitation is the significant start-up and overhead costs of such programs. Telemedicine efforts are becoming the cornerstone of stroke access in many communities

lacking comprehensive stroke expertise. However, are we potentially perpetuating delays in access to definitive care by supporting these systems rather than direct transfer to definitive stroke centers of excellence? Finally, the authors describe the state of the art in endovascular robotics, providing firsthand experience that demonstrates its feasibility and relative ease of use. Whether the advantages of robotic endovascular surgery are sufficient to justify the cost and training of users has yet to be determined. The potential for remote-controlled surgery and reduced radiation exposure to operators remains attractive.

This is a useful update in 3 technologies that provides much food for thought in acute stroke care.

<https://thejns.org/doi/abs/10.3171/2017.1.FOCUS1740>

References

1. Thiel P, Masters B: **Zero to One. Notes on Startups, or How to Build the Future.** New York: Crown Business, 2014
2. Vuong SM, Carroll CP, Tackla RD, Jeong WJ, Ringer AJ: Application of emerging technologies to improve access to ischemic stroke care. **Neurosurg Focus** 42(4):E8, 2017

Disclosures

The author reports no conflict of interest.