SNACC

SOCIETY FOR NEUROSCIENCE IN ANESTHESIOLOGY AND CRITICAL CARE

ARTICLE OF THE MONTH

Society for Neuroscience in Anesthesiology and Critical Care Expert Consensus Statement: Anesthetic Management of Endovascular Treatment for Acute Ischemic Stroke

Endorsed by the Society of NeuroInterventional Surgery and the Neurocritical Care Society

Pekka O. Talke, MD, Deepak Sharma, MD, DM, Eric J. Heyer, MD, PhD,
Sergio D. Bergese, MD, Kristine A. Blackham, MD, and Robert D. Stevens, MD

*This month's **SNACC Article of the Month**, our second in the series, relates to the Consensus Statement recently published in the Journal of Neurosurgical Anesthesiology by members of the SNACC community regarding the anesthetic management of endovascular treatment for acute ischemic stroke. The anesthetic management of patients presenting acutely in the neurointerventional suite for stroke treatment has become a topic of great interest, and great controversy, in the past 3 years. Much of the controversy surrounds whether general anesthesia or MAC is preferable for these patients, and while outcome studies have been conducted, none of them can definitively demonstrate whether it is general anesthesia per se, or other issues such as hemodynamic management, that truly affect these outcomes. Also concerning is the fact that very few of these outcome studies employed the authorship of an anesthesiologist as a consultant. It is, therefore, a breath of fresh air, but also a call to action, that we review this Consensus Statement devised by neuroanesthesiologists, and also an insightful and focused commentary on the issue written by Dr. Chanhung Lee and Dr. Adrian Gelb of the University of California, San Francisco. Dr. Lee is an Associate Professor with a clinical and research interest in anesthesia for neuroendovascular therapy, while Professor Gelb has given many national and international talks, as well as published widely, on this topic. We hope you will enjoy this educational offering, and will join in the conversation by following the **SNACC LinkedIn Group**.*

–John F. Bebawy, MD

Expert Opinion

The Beginning of a Journey of a Thousand Miles

Chanhung Z Lee, MD, PhD and Adrian W Gelb, MB, ChB, D.A., FRCPC.
Department of Anesthesia and Perioperative Care,
University of California, San Francisco

Congratulations and thanks to the task force led by Dr. Pekka Talke for taking the challenge to produce the first Guidelines on behalf of the Society for Neuroscience in Anesthesiology and Critical Care (SNACC). The team's collaborative effort has resulted in timely and expert recommendations regarding the perioperative care of patients undergoing endovascular treatment for acute ischemic stroke (AIS). With the recent rapid expansion of interventional therapy, anesthesiologists are increasingly involved in the acute care of ischemic stroke patients. This consensus document will definitely be helpful at many critical decision points in perioperative stroke care. Despite being in the era of evidence-based medicine, these Guidelines unfortunately had to be based largely on expert experience and opinions because there are very few studies to guide anesthesia practice.

Globally, stroke is a leading cause of death and significant long-term disability. From patient factors to health care delivery, stroke care has been a top priority in both clinical practice and scientific research efforts over the past 30 years. The development of endovascular approaches has been enthusiastically embraced as offering an alternative, and in some cases, an even better therapeutic outcome for the FDA-approved tissue plasminogen activator (iv tPA) treatment of AIS. This is especially true for occlusions in large cerebral arteries. However, recent multicenter randomized clinical trials failed to prove the superiority of endovascular treatment, which shocked many and dampened some enthusiasm for endovascular approaches. Much of the criticism pointed to the lack of application of newer mechanical devices that could potentially provide much quicker and more effective racanalization, compared to the earlier devices used in the studies. These studies, in fact, have highlighted the potential value of optimizing medical care of AIS patients besides achieving recanalization and restoration of blood flow to the ischemic brain. The anesthesia debate has so far focused on whether general anesthesia is good or bad. Since some, or perhaps most, interventionalists prefer general anesthesia[8] (and some patients will need it for clinical reasons), it seems that the fundamental focus should be on how best to manage anesthesia, whether it be MAC or general. As there is no convincing evidence that general anesthetic agents are detrimental in (experimental) cerebral ischemia, it would seem that the problem lies in management goals rather than agents. The debate has at least raised the awareness of the medical community regarding the importance of appropriate peri-procedural anesthetic management. Now is the time for well-focused and well-conducted studies that will involve our collaborative efforts with various stroke care specialties. The task force on Acute Ischemic Stroke has taken the first step in creating Guidelines in the absence of much-needed evidence. There isn't a more opportune time for the SNACC membership to play leading roles in this journey and demonstrate our commitment to discover evidence that will shape our clinical practice and provide better and safer perioperative care of stroke patients.