

EPISODE – Author Interview: ***“When Should Neuroendovascular Care for Patients with Acute Stroke Be Palliative?”***

Guests: Michael Young, MD, MPhil; Robert Regenhardt, MD, PhD; Leonard Sokol, MD

Host: Tim Hoff

Transcript by: Cheryl Green

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TIM HOFF: Welcome to another episode of the Author Interview Series from the *American Medical Association Journal of Ethics*. I'm your host, Tim Hoff. This series provides an alternative format for accessing the interesting and important work being done by Journal contributors each month. With me today is Dr Michael Young, a fellow in Neurology at Massachusetts General Hospital and Brigham and Women's Hospital in Boston; Dr Robert Regenhardt, a neuroendovascular fellow and stroke scientist at Massachusetts General Hospital in Boston; and Dr Leonard Sokol, a Neurology resident physician at Northwestern University in Chicago, Illinois. They're with me to discuss their article coauthored with Dr Be Leslie-Mazwi, *“When Should Neuroendovascular Care for Patients with Acute Stroke Be Palliative?”*, in the October 2021 issue of the Journal, *Palliative Surgery*. Doctors Young, Regenhardt, and Sokol, thank you so much for being here.

DR MICHAEL YOUNG: Thank you so much for this opportunity to discuss our article with you. It's really great to be here along with my coauthors, Dr Leonard Sokol and Dr Regenhardt, and our senior author who is not able to be here today, but has made really impactful contributions to this work, Dr Leslie-Mazwi.

HOFF: To begin with, Dr Young, what is the main ethics point of your article?

YOUNG: Thank you so much for that question. We start in our article with a recognition of the really limited guidance that's available for clinicians who care for patients who present with acute ischemic stroke and also have limited life expectancy due to malignancy or other terminal conditions. Clinicians in these settings are often faced with very challenging questions surrounding whether to try to preempt or reverse neurological dysfunction when the end of a patient's life may be near. When, to what extent, and according to whom should acute stroke treatments such as endovascular thrombectomy for patients with terminal illnesses be considered palliative? How should palliative or comfort care goals be set in order to guide appropriate stroke management decisions in the context of end-of-life care. Through the lens of an instructive case, we explain that while further empirical study is needed, acute stroke interventions such as thrombectomy may be appropriately considered palliative for a patient with limited life expectancy and should not be withheld solely based on a patient's serious preexisting illness. Even if a patient's life expectancy is limited, any additional stroke-related neurological impairment could potentially exacerbate suffering near the end of life. Following the ethical principles of doing good and avoiding harm, beneficence, and nonmaleficence likely requires clinicians to consider offering stroke interventions on a palliative basis, even when a patient has incurable comorbidity.

HOFF: Great, thank you. Dr Sokol, what do you see as the most important thing for health professions students and trainees to take from your article?

DR LEONARD SOKOL: Thank you. Wonderful to be here. Before commenting on an essential thing, I think, for health professions students and trainees to take from the article, I think from a neuropalliative angle that Michael was discussing, I think it would be helpful just briefly to give a backdrop and describe what neuropalliative care is. This is a burgeoning subspecialty within Neurology that seeks to identify and treat the physical, emotional, social, and spiritual forms of suffering among those with serious neurological illness and their loved ones to improve health-related quality of life. There are several dozen double board-certified neurologists and palliative medicine clinicians colloquially called neuropalliative physicians. And there are subspecialty neuropalliative clinics integrated with health systems across the United States. And in fact, there was a recent article in *The Lancet Neurology* that recently recognized the formation of the new International Neuropalliative Care Society that brings together likeminded folks with a common goal to elevate the standard of care for people with serious neurological illness.

So, I think from a neuropalliative angle, our case, and the subsequent commentary, highlights what I think is the most important takeaway for health professions students and trainees of neuropalliative care, which is that potential curative therapies, such as endovascular therapy that could substantially reduce disability for otherwise healthy people can also have a parallel, that is, I would say, an analogous, use in alleviating physical suffering and other forms of suffering in people close to the end of life. Though, as we caution in our article, and that Michael and Robert can elaborate further, additional study is needed to clarify the efficacy and ethical boundaries within these novel settings.

HOFF: Hmm. Yeah, I wasn't aware of how new this field really was. So, thank you for clarifying that for our listeners. Dr Regenhardt, do you have anything to add?

DR ROBERT REGENHARDT: And so, at this point, I'm hoping to provide a little more context about acute stroke care and sort of how we think about that in a general sense, and then how we take care of patients with pre-stroke disability and pre-stroke limited life expectancy. So, when a patient presents to the hospital with symptoms of an acute stroke, one of the first questions that we ask ourselves is, is the patient a candidate for intravenous thrombolysis with the clot busting medication tPA, alteplase or tenecteplase more recently? And this intervention really started back in the '90s. And while it certainly still has its place in modern acute stroke care, for patients specifically with large vessel occlusions, we've really seen a paradigm shift in the 2010s, where in 2015, we saw several landmark randomized controlled trials showing that endovascular thrombectomy was far superior to intravenous thrombolysis alone. In fact, it's one of the most powerful interventions in all of medicine, with a very low number needed to treat for patients with large vessel occlusion stroke.

However, early on, there were some trials that were perhaps poorly designed, which prompted a very cautious and conservative approach for the 2015 trials that were published in which patients who were deemed perhaps less likely to benefit were excluded from these trials. And those patients included those with pre-stroke disability or also pre-stroke limited life expectancy, as well as large infarcts in patients who had a long interval of time from their last known well. But because of that, we're still not, well, I should say we don't have randomized data on how best to treat these patients, but I think there are a lot of unique and important ethical considerations.

HOFF: Dr Young, any final thoughts on this?

YOUNG: For health professions students and trainees, we outline several key elements of ethically appropriate palliative stroke and neuroendovascular care. First, recognize that palliative care is more than merely pain control, as Dr Sokol nicely explained. Extend it to management of potentially disabling or distressing neurologic symptoms. Next, clarify a patient's or surrogate's values and goals of care, avoiding assumptions about a patient's values, goals, or preferences. Discuss the intended aims, prospective benefits, and possible risks of an acute stroke intervention with the patient or surrogate and explain the range of possible post-procedural outcomes to motivate transparency and discuss likely outcomes of no intervention or alternative interventions. Ensure that decision making is sensitive to patient preferences, values, and goals. And finally, clearly document and communicate decisions to colleagues and care team members. Recognizing the relatively high frequency of neurological complications, including stroke, among patients with terminal illnesses, clinicians can implement patient-centered acute stroke care in palliative contexts with guidance from the framework that we outline. And similar principles may be applied in considering the appropriateness of a range of other palliative interventions in neurological contexts.

HOFF: Great, thank you. And finally, if you could add a point to your article that you don't feel like you got to fully explore, what would that be?

YOUNG: It's a great question. And I'd like to emphasize that now is a really incredible time for the field of neurology and neuroscience at large with novel treatments and therapeutic technologies increasingly becoming available not only for those with stroke, but for a range of neurological conditions. And while neuroscience has endowed us with a really astounding arsenal of tools to understand and manipulate the brain, only with appropriate ethical foresight can it be ensured that these tools are responsibly developed and deployed. Because the fundamental rights, safety, welfare, and even perhaps identities of patients may be affected in distinctive ways by interventions that impact the nervous system, research and clinical implementation of treatments and technologies in this class introduce profound neuroethics issues that generate vital opportunities for further study. The fruitful conversation between ethics, neuroscience, medicine, and philosophy in shedding light on shared questions not only fortifies the conceptual foundations of these fields, but can help to ensure that researchers, clinicians, and students are equipped to anticipate and responsibly handle the downstream ethical implications of amazing advances that our fields are now witnessing and benefiting from.

HOFF: Any final thoughts, Dr Sokol or Dr Regenhardt?

REGENHARDT: Just to follow up that really, what we want folks to consider and be aware of is, certainly we should keep a very open mind for how best to approach these patients. And I think there are a lot of arguments made to be very inclusive with our treatment approach. And certainly, it's very important to keep track of these patients and enroll them in trials, recruit them into studies so that we can better describe and share with others how their outcomes will be affected by these very, very powerful interventions.

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HOFF: Doctors Young, Regenhardt, and Sokol, thank you so much for your contribution to the Journal and for being on the podcast today.

SOKOL: Thanks so much for having us.

REGENHARDT: Thank you.

YOUNG: Thank you so much for the opportunity to be here and to share these important ideas with you.

HOFF: To read the full article and the rest of the October 2021 issue for free, visit our site, [JournalofEthics.org](https://www.journalofethics.org). We'll be back soon with more *Ethics Talk* from the *American Medical Association Journal of Ethics*.