Letter by Freeman and Taussky Regarding Article, “Near Infrared Spectroscopy for the Detection of Desaturations in Vulnerable Ischemic Brain Tissue: A Pilot Study at the Stroke Unit Bedside”

To the Editor:

We read with great interest the article by Aries et al,1 in which they studied near infrared spectroscopy (NIRS) to monitor 9 patients with ischemic stroke who had more “desaturations” in the affected hemisphere than the nonaffected hemisphere. Their study raises questions of why this would pathophysiological occur, such as different collateral flow or differential cerebral O2 consumption after stroke. We believe NIRS is an emerging method of measuring mixed arterial–venous brain tissue oxygenation with its primary advantage being a noninvasive procedure (versus invasive brain tissue PbO2, Licox probes, etc) as well as having a simple application and continuous trending capability for cerebral desaturations. The disadvantages of NIRS technology is that it provides only “regional” saturation of oxygen probe information, similar to other, typically invasive, neurointensive care unit probes such as Licox PbO2, intracranial pressure probes, or Hemedex cerebral blood flow sensors. Despite these limitations, we believe that NIRS probes have the potential to be useful for managing patients with stroke and NIRS regional saturation of oxygen correlates with CT perfusion-derived regional cerebral blood flow2 and also with multimodal monitoring such as alpha delta ratio on quantitative electroencephalography combined with NIRS.3

Disclosures

None.

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