



ARTICLE OF THE MONTH

General Anesthesia Versus Conscious Sedation for Endovascular Treatment of Acute Ischemic Stroke: The AnStroke Trial (Anesthesia During Stroke)

Hendén PL, Rentzos A, Karlsson J-E *et al.* General Anesthesia Versus Conscious Sedation for Endovascular Treatment of Acute Ischemic Stroke. The AnStroke Trial (Anesthesia During Stroke). *Stroke* 2017; 48:1601-7.

Welcome to the August 2017 SNACC Article of the Month! The AnStroke trial mentioned above sheds new light on the controversy surrounding the anesthetic choice for the endovascular treatment of acute ischemic strokes. The article was chosen by Judith Dinsmore, MD, FRCA.

Dr. Dinsmore is a consultant neuroanesthetist and senior lecturer at St. George's University Hospital, London (United Kingdom). She has a particular interest in anesthesia for awake craniotomy and interventional neuroradiology.

Dr. Dinsmore has published original articles, chapters and books on a variety of topics. She has lectured nationally and internationally and is a former editor at *Anaesthesia Cases*. She is an examiner for both the final fellowship exam for the Royal College of Anaesthetists (RCOA) and the Intercollegiate Specialty Board in Neurosurgery. She is the president of the Neuroanaesthetic and Critical Care Society of Great Britain & Ireland (NACCSGBI) Executive Council and has represented the society on several national working groups including multidisciplinary guidelines on provision of a safe and effective thrombectomy service.

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~ Nina Schloemerkerper, MD; Oana Maties, MD; Adrian Pichurko, MD

Commentary

Judith Dinsmore, MD, FRCA

Optimal anaesthesia for mechanical thrombectomy in acute ischaemic stroke (AIS) remains contentious. To date, consensus appeared to favour conscious sedation (CS) over general anaesthesia (GA) as this seemed to result in better neurological outcome. However, this was largely based on retrospective studies with few details regarding intraprocedural variables such as blood pressure, respiratory parameters, drugs used or even what constituted a GA. Many studies also suffered from selection bias with the GA group having higher NIHSS scores and in some a higher proportion of posterior circulation strokes.

The AnStroke investigators hypothesised that the anaesthesia technique would have no impact on outcome if hypotension was avoided. This was a single centre prospective randomized controlled trial; patients with anterior circulation AIS were randomly allocated to GA or CS, but with strict blood pressure control (SBP 140-180 mmHg) and normoventilation. Anaesthetists were involved in all the procedures; CS was provided by a remifentanil infusion and GA using propofol and remifentanil for induction and with sevoflurane and remifentanil maintenance. There was intention to treat analysis and the primary outcome was modified Rankin Scale (mRS) at three months by a neurologist blinded to allocation group. Forty-five patients were analyzed in each group. Groups were well balanced except for a higher NIHSS score in the GA group. Successful recanalization was achieved in 90% of patients. There was no difference between GA and CS groups in mRS at three months or successful recanalization. There was no difference in early neurological recovery, infarction volume, anaesthetic or neurointerventional complications.

Although small and single centred, this is a well conducted study which does not support the use of one anaesthetic technique over another. The SIESTA trial, a prospective randomized trial of CS versus GA in AIS patients, published in January of this year also failed to show an advantage of CS over GA. In fact, in this study the proportion of patients with mRS < 5 (a secondary outcome) at three months was significantly higher in the GA group. It may be that the tide is now beginning to turn. Perhaps, more important than CS versus GA, is the presence of an appropriately trained anaesthetist to assess, monitor and manipulate cardiovascular and respiratory parameters? In particular, the provision of appropriate anaesthesia and rigorous blood pressure control.