things that need to be studied that will likely minimize CSA-AKI? Of course. The dialog represented by the *Journal* commentaries related to the article by Ranucci and colleagues reflects the article's importance. Hopefully, this dialog of commentaries will stimulate further rigorous studies to address incompletely resolved issues surrounding CSA-AKI. I look forward to these future studies.

Victor A. Ferraris, MD, PhD
Department of Surgery, College of Medicine
University of Kentucky
Lexington, Ky

References

1. Ranucci M, Johnson I, Willcox T, Baker RA, Boer C, Baumann A, et al. Goal-directed perfusion to reduce acute kidney injury: a randomized trial. *J Thorac Cardiovasc Surg.* 2018;156:1918-27.e2.
2. Montisci A, Travaglini S, Miceli A. Commentary: The lack of a magic bullet. *J Thorac Cardiovasc Surg.* 2019;157:2352-3.
3. Ortega-Loubon C, Fernández-Molina M, Carrascal-Hinojal Y, Fulquet-Carreras E. Cardiac surgery-associated acute kidney injury. *Ann Card Anaesth.* 2016;19:687-98.
4. Ferraris VA. Perfusion-induced acute kidney injury: a litany of uncertainty and frustration. *J Thorac Cardiovasc Surg.* 2018;156:1928-30.
5. Ortega-Loubon C, Fernández-Molina M, Fierro I, Jorge-Monjas P, Carrascal Y, Gómez-Herreras JI, et al. Postoperative kidney oxygen saturation as a novel marker for acute kidney injury after adult cardiac surgery. *J Thorac Cardiovasc Surg.* 2019;157:2340-51.e3.
6. Montisci A, Miceli A. Reply: Cardiac surgery-associated acute kidney injury: Finding the gunpowder. *J Thorac Cardiovasc Surg.* 2020;159:e71-2.
7. Ortega-Loubon C, Fernández-Molina M, Fierro I, Jorge-Monjas P, Carrascal Y, Gómez-Herreras JI, et al. Postoperative kidney oxygen saturation as a novel marker for acute kidney injury after adult cardiac surgery. *J Thorac Cardiovasc Surg.* 2019;157:2340-51.e3.

<https://doi.org/10.1016/j.jtcvs.2019.12.014>

REPLY FROM THE AUTHORS: ACUTE KIDNEY INJURY: INFINITY TIMES INFINITY Reply to the Editor:

Acute kidney injury (AKI), a complex disease associated with poor outcomes, remains an open issue in cardiac surgery despite much effort. Although our perspectives differ, we are all engaged in improving our results. Whether it is the lack of a magic bullet (our view) or the need of protective armor (your view), the meaning does not change.^{1,2} As specified previously, AKI is a 1 million-piece puzzle that involves many preoperative, intraoperative, and postoperative variables.³ Any potential measure to prevent it is welcome. We can discuss this an infinite number of times. Perhaps we made a mistake. AKI is not a 1 million-piece puzzle—it's much more.

Authors have nothing to disclose with regard to commercial support.

Antonio Miceli, MD, PhD^a
Andrea Montisci, MD^{b,c}

^aDepartment of Minimally Invasive Cardiac Surgery

^bDepartment of Anesthesia and Intensive Care

Cardiothoracic Center

Istituto Clinico Sant'Ambrogio

Milan, Italy

^cDepartment of Cardiac Surgery

University of Milan

Milan, Italy

References

1. Montisci A, Travaglini S, Miceli A. The lack of a magic bullet. *J Thorac Cardiovasc Surg.* 2019;157:2352-3.
2. Ortega-Loubon C, Tamayo E, Jorge-Monjas P. Reply: Cardiac surgery-associated acute kidney injury: a protective armor rather than a lethal ammunition. *J Thorac Cardiovasc Surg.* 2020;159:e261.
3. DiBacco L, Montisci A, Miceli A. Commentary: Acute kidney injury: The one-million-pieces puzzle. *J Thorac Cardiovasc Surg.* 2019;157:2367-8.

<https://doi.org/10.1016/j.jtcvs.2019.12.015>

CEREBROVASCULAR COMPLICATIONS AFTER CARDIAC SURGERY: IT IS TIME TO TRACK AND TREAT LARGE VESSEL OCCLUSION

To the Editor:

We read with a great interest the recent article by Sheriff and colleagues¹ concerning large vessel occlusion (LVO) stroke after cardiothoracic surgery (CTS). Sheriff and colleagues¹ conducted a monocenter study of their own database, with 5947 patients being reviewed between July 2013 and April 2018. Among 148 patients with cerebrovascular complications within 30 days of surgery, 10.1% had LVO. Almost half of these patients were considered candidates for emergency thrombectomy, with encouraging functional outcome at 3 months. This was also suggested by a case-control study on perioperative stroke, which included 68% CTS patients.²

We also collected data on LVO in our center. We reviewed all consecutive adult patients hospitalized in the intensive care unit within 2 days after CTS with cardiopulmonary bypass between August 2016 and March 2018 in our tertiary center. Of 1946 patients, 57 (2.9%)