

LETTER TO THE EDITOR

We read with interest the recent article written by Dr. Juan Jose Olivero titled “Administration of Anesthesia to Patients with Renal Failure” and published in the *Methodist DeBakey Cardiovascular Journal*, Volume 11, Issue 3 (September 2015). We do agree with some points highlighted in the article but would like to elaborate further on the topic.

Firstly, one should understand that the anesthesiologist is a perioperative critical care physician who manages patients in the operating room, where the condition of the patient could change rapidly. The dynamic environment of the operating room is far different than the environment of an outpatient or inpatient setting or even an intensive care unit. The acute stress of surgery and hemodynamic changes can be pronounced, and the anesthetic care has to be tailored for each and every individual patient, not generalized as mentioned in the article.

Regarding the statement made in the article, “Never place a central line in the same extremity where the arteriovenous access...is present,” there is no reference cited. Perhaps this is a personal opinion rather than a scientific recommendation. Patients with end-stage renal disease (ESRD) frequently have very poor intravenous access, which likely will require ultrasound to access their extremities as well as for central venous access. For those patients on long-term hemodialysis, central venous occlusion is also a high possibility. Obtaining an intravenous catheter of sufficient size to administer medications and fluids is paramount in providing safer anesthesia as these patients frequently undergo vascular procedures, where there is potential for blood loss requiring rapid volume resuscitation and administration of cell saver fluid. A medical literature search did not yield any conclusive evidence linking arteriovenous fistula complication with central line placement in the same extremity, nor do we believe it is possible to conduct a well-randomized control trial. Clinicians have frequently overstated the fear of occluding the dialysis access. Administering anesthesia without adequate intravenous access would be substandard care, and this is well-published in the medical literature.¹ We suggest, however, that central venous catheter placement in the same extremity should be weighed against risk and benefit if no other options are available. As with all patients, central venous access should be kept for only the short term and removed as soon as possible.²

A second point made in the article advises against the administration of large amounts of intravenous fluids. This cannot be generalized for every patient with ESRD for every

operative procedure. We strongly question the guideline of limiting fluid to no more than 1 mL/kg for minor procedures even in clinically stable patients. When questioning these patients preoperatively, it is imperative for the anesthesiologist to uncover the answers to five specific questions: (1) When was the last hemodialysis? (2) How many times a week does the hemodialysis occur? (3) How much volume is removed with each hemodialysis run? (4) How long is each hemodialysis run? (5) Are there any symptoms that occur that limit the hemodialysis run?

With the answers to these specific questions, the patient’s weight, and the specific procedure that the patient will undergo, the anesthesiologist can determine the patient’s preoperative fluid status starting point and how much fluid loss the patient may be able to tolerate from the procedure as well as the influence of anesthetic medications, all of which cause vasodilation by reducing sympathetic vascular tone. This supports our goal-directed fluid management therapy that we utilize daily, and it has been validated in several clinical trials.³

Respectfully,

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