

Letters to the Editor

To the Editor:

I want to congratulate Deogaonkar et al (“Gender Rather Than Choice of Intermediate Duration Opioids Affects Emergence After Craniotomy for Large Intracranial Tumors,” *The Ochsner Journal*, Volume 11, Number 1.) for their excellent study of the effects of 4 different anesthetic regimens on emergence from anesthesia in patients who have undergone craniotomies for microsurgical resection of large brain tumors. Using excellent statistical analysis of their data, they found that female gender was the only factor that significantly influenced time to emergence from anesthesia in their patient population, and type of anesthetic regimen used had no significant effect on emergence. This research study is important for perioperative management of neurosurgical patients, especially with regard to the ability to examine postoperative patients in a timely fashion to rule out any neurological complications, at least in the immediate postoperative period. What is unclear is whether there are any long-term side effects of the anesthetic regimens used: This may be a good follow-up study in the authors’ patient population.

Wale Sulaiman, MD, PhD, FRCS (C)
Department of Neurosurgery, Ochsner Clinic Foundation
wsulaiman@ochsner.org

Authors’ Reply

The authors would like to thank D. Sulaiman for his interest in our work and complimentary comments. The goal of our study was definitively limited to the immediate postsurgical recovery period. Although it is important to assess functional neurological status in neurosurgical patients immediately after surgery to gauge the need for urgent intervention or return to the operating room, Dr Sulaiman appropriately raises the question of longer term outcomes in relation to anesthetic regimens and management. Indeed, anesthetic depth,¹⁻³ type of anesthetic or sedative,⁴ and goal-directed cardiovascular therapy⁵ have been associated with longer term outcomes such as 1-year mortality, time to hospital discharge, and morbidity.⁶ Going even beyond such relatively crude assessments, functional outcome in patients with neurological disease might prove to be even more interesting and beneficial to study.

Armin Schubert, MD, MBA
Department of Anesthesiology, Ochsner Clinic Foundation,
aschubert@ochsner.org

REFERENCES

1. Sieber FE, Zakriya KJ, Gottschalk A, et al. Sedation depth during spinal anesthesia and the development of postoperative delirium in elderly patients undergoing hip fracture repair. *Mayo Clin Proc.* 2010;85::18-26; Erratum in *Mayo Clin Proc.* 2010;85:400.
2. Lindholm ML, Träff S, Granath F, et al. Mortality within 2 years after surgery in relation to low intraoperative bispectral index values and preexisting malignant disease. *Anesth Analg.* 2009;108:508-512.
3. Monk T, Sanai V, Weldon C, Sigl J. Anesthetic management and one-year mortality after noncardiac surgery. *Anesth Analg.* 2005;100:4-10.
4. Riker RR, Shebabi Y, Bokesch PM, et al. Dexmedetomidine vs midazolam for sedation of critically ill patients: a randomized controlled trial. *JAMA.*
5. E, Nguyen B, Havstad S, et al. Early goal-directed therapy in the treatment of severe sepsis and septic shock. *New Engl J Med.* 2001;345:1368-1377.
6. Phan TD, Ismail H, Heriot AG, Ho KM. Improving perioperative outcomes: fluid optimization with the esophageal Doppler monitor, a metaanalysis and review. *J Am Coll Surg.* 2008;207:935-941.

To the Editor:

I read with interest “Pediatric Cuffed Endotracheal Tubes: An Evolution of Care” in the last issue of *The Ochsner Journal*. The article analyzes the question of whether a cuffed endotracheal tube has any advantage over a noncuffed tube in the pediatric population. In today’s era of refined medical technology, both methods attain good results. However, there is no doubt that microcuffed tubes have advantages such as prevention of aspiration, lack of reintubation, dependability of good ventilation parameters, and paucity of ambient nitrous oxide. In children weighing less than 3 kg, no reported data compare microcuffed and noncuffed endotracheal tubes; thus, the time-honored uncuffed tube deserves continued use until studies prove otherwise. I believe that with time and continued refinement, the microcuffed endotracheal tube will prove superior.

This article also aroused my memory to recall our early interest in the cause and prevention of tracheal stenosis related to cuffed endotracheal tubes. In the 1960s when extracorporeal circulation was primitive by today’s standards, we encountered a significant number of patients with postperfusion multiple organ injury requiring long-term ventilation. The most common and serious complication was tracheal stenosis at the cuff site. The cuff on endotracheal tubes at that time was shorter and made of material with less compliance, thus exerting a high lateral pressure.

Because the majority of these patients were of poor general health and exhibited long periods of hypotension, the pressure from the cuff caused ischemia, which resulted in weakness of the tracheal wall, dilatation, fibrosis, and finally tracheal stenosis. In an attempt to prevent this complication, we developed an apparatus that would inflate the cuff during inspiration and deflate the cuff during expiration to allow the tracheal wall to receive a normal blood supply during this period. A device was designed to provide intermittent inflation of the cuff with a constant volume for use with both volume- and pressure-limited ventilators. Precautions had to be taken to prevent vomiting and aspiration during expiration in patients with a dynamic ileus or intestinal obstruction.

In early 1969, we presented, at the annual meeting of the American Association of Thoracic Surgery, our

results with 100 consecutive patients using the intermittent cuff inflation and demonstrated no untoward consequences.¹ In discussion of our paper, 2 different practitioners stated they had experimented with the use of large, thin-walled cuffs on endotracheal tubes and had not noticed any ill effects. A few years later, such tubes became commercially available and became the standard.

John Ochsner, MD

Department of Surgery, Ochsner Clinic Foundation,
jochsner@ochsner.org

REFERENCE

1. Arens JF, Ochsner JL, Gee G. Volume-limited intermittent cuff inflation for long-term respirator assistance. *J Thorac Cardiovasc Surg.* 1969;58:837-841.