

- 6 Bayman EO, Dexter F, Todd MM. Prolonged operative time to extubation is not a useful metric for comparing the performance of individual anesthesia providers. *Anesthesiology* 2016;124:322–38.
- 7 Masursky D, Dexter F, Kwakye MO, et al. Measure to quantify the influence of time from end of surgery to tracheal extubation on operating room workflow. *Anesth Analg* 2012;115:402–6.
- 8 Apfelbaum JL, Grasela TH, Jr Hug CC, et al. The initial clinical experience of 1819 physicians in maintaining anesthesia with propofol: Characteristics associated with prolonged time to awakening. *Anesth Analg* 1993;77(4 suppl):S10–4.
- 9 Vannucci A, Riordan IR, Prifti K, et al. Prolonged time to extubation after general anaesthesia is associated with early escalation of care: A retrospective observational study. *Eur J Anaesthesiol* 2021;38(494):504.
- 10 Dexter F, Epstein RH. Increased mean time from end of surgery to operating room exit in a historical cohort of cases with prolonged time to extubation. *Anesth Analg* 2013;117:1453–9.

Franklin Dexter, MD, PhD, FASA*

University of Iowa, Department of Anesthesia, Division of Management Consulting, 200 Hawkins Drive, Iowa City, IA 52242, United States of America

<https://doi.org/10.1053/j.jvca.2022.09.099>

Airway Management for Tracheal Resections – Comments on a Controversial Approach



To the Editor:

I have read with great interest the article by Defosse et al.¹ As the authors emphasized, the number of tracheal resections is relatively modest and diverse practices described in the literature lack guidance from large conclusive trials.² Nevertheless, studies with a few cases can provide valuable information for clinicians. The new approach in the author's study was the retrograde surgical insertion of airway exchange catheters (AECs) for high-frequency jet ventilation (HFJV), which seems to be somewhat complicated and may be risky. AECs are intended for an endotracheal tube insertion or change and are not designed for intraoperative HFJV. Instead, commercially available HFJV catheters that are thinner than AECs and have an established safety record can be employed. HFJV catheters would certainly not obstruct the surgical view and do not require extra manipulation for the insertion. Some AECs are very rigid; the Cook Airway Exchange Catheter, Extra-Firm with Soft Tip, size 14F (Cook, Bloomington, IN) used by the authors is not the softest in the market. Retrograde insertion of these catheters resulted in the proximal catheter ends emerging from either through the laryngeal mask airway or in the mouth. This observation indicated that the retrograde insertion was blind, and the surgeon could not control where the catheters went. The authors did not report any catheter-related complications, but this finding may have been due to the small sample size. Blindly inserting a relatively rigid catheter into the pharynx may be associated with naso- or oropharyngeal injuries similar to a nasogastric tube.³

Conflict of Interest

The author, Dr. Lajos Szentgyorgyi, has had a research grant from Medtronic Limited.

DOI of original article: <http://dx.doi.org/10.1053/j.jvca.2022.05.033>.

References

- 1 Defosse J, Schieren M, Hartmann B, et al. A new approach in airway management for tracheal resection and anastomosis: A single-center prospective study. *J Cardiothorac Vasc Anesth* 2022;36:3817–23.
- 2 Schieren M, Böhrer A, Dusse F, et al. New approaches to airway management in tracheal resections—a systematic review and meta-analysis. *J Cardiothorac Vasc Anesth* 2017;31:1351–8.
- 3 Jones C, Stawicki SPA, Evans DC. Mechanical complications of nasogastric tubes. In: Rajendram R, Preedy VR, Patel VB, editors. *Diet and Nutrition in Critical Care*, New York, NY: Springer New York; 2015. p. 1625–35.

Lajos Szentgyorgyi, MD, DESAIC, EDRA, AFRCA, AFICM¹
Manchester University NHS Foundation Trust, Wythenshawe Hospital, Cardiothoracic Critical Care Unit, Manchester, United Kingdom

<https://doi.org/10.1053/j.jvca.2022.09.093>

Hyponatremia, Liver Transplantation and Tromethamine Availability



To the Editor:

We read, with interest, Verbeek et al recent review of the perioperative implications and management of hyponatremia in liver transplant recipients.¹ We share their concerns with the inevitable sodium load associated with administration of sodium bicarbonate when used for management of metabolic acidosis during the transplant. Tromethamine was advocated for treatment of metabolic acidosis in the presence of severe hyponatremia, but its availability is limited.^{2,3} In early 2018, the manufacturing company Hospira advised the Food and Drug Administration that the production of tromethamine had been discontinued and was unrelated to the drug's safety or efficacy.⁴ Liver transplant anesthesiologists worked with hospital pharmacy partners to locate a supply of tromethamine, which is also used as a component of commercial organ preservative solutions. Our pharmacy secured smaller volumes of tromethamine from a compounding pharmacy (Central Admixture Pharmacy Services), which has multiple locations across the United States, including one in Houston, Texas (Fig 1). The original source of tromethamine was a 500- mL glass bottle, which facilitated the large volumes often required during liver transplantation based on proportional correction of acidosis. The current supply is in 50- mL syringes, necessitating nuanced and partial correction along with other strategies as summarized by Verbeek.¹ Given the potentially devastating complications of rising plasma sodium during a liver transplant, tromethamine is an essential tool for anesthesiologists in the severely hyponatremic patient. Preparation of tromethamine by compounding pharmacies may allow limited access to the drug for use in liver transplantation.

Conflicts of Interest

None.

DOI of original article: <http://dx.doi.org/10.1053/j.jvca.2021.05.027>.

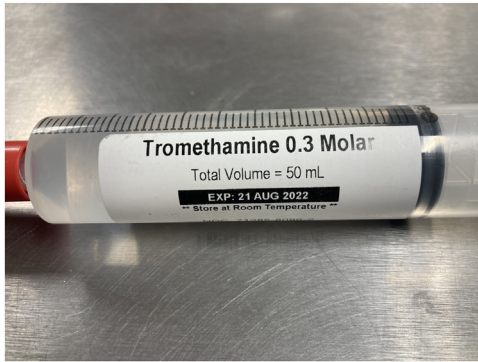


Fig 1. 50 ml tromethamine syringe.

References

- 1 Verbeek TA, Saner FH, Bezinover D. Hyponatremia and liver transplantation: A narrative review. *J Cardiothorac Vasc Anesth* 2022;36:1458–66.

- 2 Crismale JF, Meliambro KA, Demaria S, et al. Prevention of the osmotic demyelination syndrome after liver transplantation: A multidisciplinary perspective. *Am J Transplant* 2017;17:2537–45.
- 3 Rangrass G, Balogh J, Wagener G, et al. Trends in liver transplantation. *ASA Monitor* 2021;85:31.
- 4 Available at: <https://www.govinfo.gov/content/pkg/FR-2019-07-032019-14146/pdf/2019-14146.pdf> Pages 31785-6. Accessed November 10, 2022.

Haw Yu Lin, MD*

Shannon Deese, RPh[†]

Anitria Stigers, RPhT, BSHCM[†]

Srikanth Sridhar, MD*

Evan G. Pivalizza, MBChB, FFASA^{*,1}

*Department of Anesthesiology, McGovern Medical School, UTHHealth,
Houston, TX

[†]Operating Room Pharmacy, Memorial Hermann Hospital, Houston, TX

<https://doi.org/10.1053/j.jvca.2022.09.087>