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LETTER TO THE EDITOR

Anesthetic impacts on pulmonary function: Implications for cystic fibrosis

Editor,

We have read with interest the article by Williamson and Sharma[1] on cystic fibrosis (CF). Their succinct review highlighted several essential points concerning the perioperative management of patients with CF. One area warrants further discussion.

The article emphasizes the importance of rapid return to baseline pulmonary function with special consideration to the management of patient's respiratory secretions in the perioperative setting. Thus, it is essential to delve into the pulmonary impact of various anesthetics. Ledowski et al demonstrated superior mucociliary clearance in patients receiving propofol and remifentanil, as compared to sevoflurane and remifentanil anesthetic.[2] The foundation of perioperative care for CF patients relies heavily on management of thick secretions,[1] making maneuvers to facilitate enhanced mucociliary clearance potentially valuable in this population. In addition, volatile anesthetics attenuate hypoxic pulmonary vasoconstriction to a greater degree than propofol.[3] This worsens ventilation-perfusion mismatch, which is already impaired in patients with CF.[4] Moreover, propofol infusion is generally associated with fewer respiratory adverse events during pediatric anesthesia care[5], though this has not been specifically assessed in patients with CF.

Williamson and Sharma suggest the use of intravenous anesthesia for pulmonary procedures in post-transplant CF patients.[1] Our clinical experience and the aforementioned facts suggest that propofol may be superior to volatile anesthetics for all CF patients undergoing any procedure. We present these data for public consideration, and hope that future investigations may elucidate the potential benefit of propofol over volatile anesthetics for these fragile patients.

DATA AVAILABILITY STATEMENT

Data sharing is not applicable to this article as no new data were created or analyzed in this study.

Sandy Tadros[1]
Rebecca Nause-Osthoff[2]
Bishr Haydar[3]

[1]*Department of Anesthesiology, University of Michigan Medicine, Ann Arbor, Michigan, USA*
[2]*Division of Pediatric Anesthesiology, University of Michigan, Ann Arbor, Michigan, USA*
[3]*Department of Anesthesiology, University of Michigan, Ann Arbor, Michigan, USA*

Correspondence
Sandy Tadros, Department of Anesthesiology, University of Michigan Medicine, 1500 E Medical Center Dr., Ann Arbor, MI 48109-5000, USA.
Email: shtadros@gmail.com

Section Editor: David Polaner

ORCID

Sandy Tadros https://orcid.org/0000-0003-3341-8721
Bishr Haydar https://orcid.org/0000-0003-2709-189X

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