Letter From Tripathi et al Regarding Article, “Perioperative Dexmedetomidine Improves Outcomes of Cardiac Surgery”

To the Editor:

In a recent issue of Circulation, Ji and colleagues1 report improved morbidity and mortality with perioperative use of dexmedetomidine in cardiac surgery. We commend the authors for exploring the benefits of dexmedetomidine on outcomes despite drug cost. The mortality benefits at in-hospital, 30-day, and 1-year points are notable.

Although outcomes were risk adjusted, the patients who received dexmedetomidine had significantly shorter cardiopulmonary bypass duration (181.8 vs 199.8 minutes) and lower incidence of intra-aortic balloon pump requirement (6.87% vs 14.13%). The multivariate model assessing delirium did not include cardiopulmonary bypass duration, yet longer durations are associated with an increase in postoperative delirium.2 Furthermore, the multivariate model assessing mortality did not include intra-aortic balloon pump requirement, yet it is associated with an 18.7-fold increase in mortality.1 The differences in multivariate modeling between this study and others1,3 present conflicting data and highlight the importance of a randomized study before adopting dexmedetomidine to facilitate appropriate patient selection and improve outcomes. In our experience, we have seen the benefits of this drug most often after aortic surgery, especially in patients with aortic dissection who are challenged with postoperative encephalopathy and malignant hypertension. Despite our successful use of dexmedetomidine in this small patient population and select others, we are unable to promote the broad use of dexmedetomidine for its potential benefits in cardiac surgery based on this study, because it may be unwarranted given confounding variables and risks.

Disclosures

None.

Ravi S. Tripathi, MD
Department of Anesthesiology
The Ohio State University Wexner Medical Center
Columbus, Ohio

Pamela K. Burcham, PharmD, BCPS
Erik E. Abel, PharmD, BCPS
Department of Cardiothoracic Surgery
The Ohio State University Wexner Medical Center
Columbus, Ohio

References


Although dexmedetomidine has a role in after cardiac surgery, many patients in this population may not tolerate its systemic antiadrenergic effects. The differences in multivariate modeling between this study and others1–3 present conflicting data and highlight the importance of a randomized study before adopting dexmedetomidine to facilitate appropriate patient selection and improve outcomes. In our experience, we have seen the benefits of this drug most often after aortic surgery, especially in patients with aortic dissection who are challenged with postoperative encephalopathy and malignant hypertension. Despite our successful use of dexmedetomidine in this small patient population and select others, we are unable to promote the broad use of dexmedetomidine for its potential benefits in cardiac surgery based on this study, because it may be unwarranted given confounding variables and risks.

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Ravi S. Tripathi, MD
Department of Anesthesiology
The Ohio State University Wexner Medical Center
Columbus, Ohio

Pamela K. Burcham, PharmD, BCPS
Erik E. Abel, PharmD, BCPS
Department of Cardiothoracic Surgery
The Ohio State University Wexner Medical Center
Columbus, Ohio

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