



Does overweight really play protective role in elderly patients after cardiac surgery?

Zeyi Cheng^{1#}, Luchen Wang^{2#}, Xiaogang Sun²

¹Department of Cardiovascular Surgery, West China Hospital, Sichuan University, Chengdu, China; ²Aortic and Vascular Surgery Center, Fuwai Hospital, National Center for Cardiovascular Diseases, Chinese Academy of Medical Sciences and Peking Union Medical College, Beijing, China

[#]These authors contributed equally to this work.

Correspondence to: Xiaogang Sun, MD, PHD. Aortic and Vascular Surgery Center, Fuwai Hospital, National Center for Cardiovascular Diseases, Chinese Academy of Medical Sciences and Peking Union Medical College, No. 167 North Lishi Road, Xicheng District, Beijing, China. Email: xiaogangsun2006@vip.sina.com.

Response to: Zhang Y, Zheng Q, Dai X, *et al.* Overweight is associated with better one-year survival in elderly patients after cardiac surgery: a retrospective analysis of the MIMIC-III database. *J Thorac Dis* 2021;13:562-74.

Submitted Mar 18, 2021. Accepted for publication Apr 09, 2021.

doi: 10.21037/jtd-21-482

View this article at: <http://dx.doi.org/10.21037/jtd-21-482>

We have read with great interest the article titled “Overweight is associated with better one-year survival in elderly patients after cardiac surgery: a retrospective analysis of the MIMIC-III database.” by Zhang (1). The article pointed that overweight was associated with better 1-year survival in patients after cardiac surgery when compared to normal weight. The protective effect of overweight on post-cardiac surgery survival was confined to elderly patients (>60 years).

We have some comments on this conclusion. First, the authors collected BMI, age, gender, smoking, drinking, and other parameters for analysis, but they didn't explain the height and weight, only BMI could not reach such a conclusion, Ranucci *et al.* conducted a retrospective cohort study included 7,939 consecutive patients who underwent cardiac surgery, they find contrary to men, in women obesity does not reduce the operative mortality in cardiac surgery, whereas the height seems to be associated with a lower mortality (2). Next, the results were derived from multiple centers, postoperative management strategies may also affect the follow-up outcomes, such as oral anticoagulant, embolism events, bleeding events, which constituted confounding bias to reach such a conclusion. What's more, propensity matching cannot account for clustering after matching and other clinical factors in the perioperative period that could have impacted outcomes in these patients. Finally, the authors didn't introduce

the atrial fibrillation (AF) history, as we all known, AF occurrence is more common after cardiac surgery, Serban *et al.* (3) pointed out that obesity predisposes to a larger number of prolonged AF episodes in the early postoperative period after cardiac surgery for CAD or valvular heart disease. Phan *et al.* (4) made a meta-analysis and suggested that obesity is associated with a moderately higher risk of Post-operative AF (POAF), While POAF is also related to an increased incidence of stroke, 30-day mortality and respiratory complications. So we believe it is better to add those parameters to come to a more convincing conclusion.

Acknowledgments

Funding: This work was supported by Beijing Municipal Science and Technology Commission, China, Major Special Project #Z181100001718197.

Footnote

Provenance and Peer Review: This article was a standard submission to the journal. The article did not undergo external peer review.

Conflicts of Interest: All authors have completed the ICMJE uniform disclosure form (available at <http://dx.doi.org/10.21037/jtd-21-482>). The authors have no conflicts of

interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the non-commercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

Cite this article as: Cheng Z, Wang L, Sun X. Does overweight really play protective role in elderly patients after cardiac surgery? J Thorac Dis 2021;13(5):3186-3187. doi: 10.21037/jtd-21-482

References

1. Zhang Y, Zheng Q, Dai X, et al. Overweight is associated with better one-year survival in elderly patients after cardiac surgery: a retrospective analysis of the MIMIC-III database. J Thorac Dis 2021;13:562-74.
2. Ranucci M, de Vincentiis C, Menicanti L, et al. A gender-based analysis of the obesity paradox in cardiac surgery: height for women, weight for men? Eur J Cardiothorac Surg 2019;56:72-8.
3. Serban C, Arinze JT, Starreveld R, et al. The impact of obesity on early postoperative atrial fibrillation burden. J Thorac Cardiovasc Surg 2020;159:930-938.e2.
4. Phan K, Khuong JN, Xu J, et al. Obesity and postoperative atrial fibrillation in patients undergoing cardiac surgery: Systematic review and meta-analysis. Int J Cardiol 2016;217:49-57.