



Letter to the Editor

A Letter to the Editor on the article “Development and validation of a nomogram predicting the probability of type A aortic dissection at a diameter below 55 mm: A retrospective cohort study”
*To the Editor*

We read the article by Wu et al. [1] with great interest. This retrospective study developed a nomogram in predicting the probability of type A aortic dissection (AAD) at an ascending aorta diameter below 55 mm. However, there are a few points which need to be clarified.

First, this study enrolled 896 patients with acute AAD diagnosed by computed tomography angiography (CTA) and assigned these patients to two groups based on the ascending aorta diameter of < 55 mm or \geq 60 mm. A prediction model was developed by univariate and multivariate logistic regression analyses to predict the possibility of developing AAD at an ascending aortic diameter of less than 55 mm, and the nomogram model was then validated. As all the research subjects had been diagnosed to have AAD by CTA which is the “golden standard” of diagnosing aortic dissection, there is a question of how to predict the possibility of developing AAD since all these subjects had been diagnosed to have AAD? Thus, a prospective study to compare the nomogram model of predicting the possibility of AAD with CTA is a more appropriate study.

Second, the condition for application of logistic regression requires binary or multiple dependent variables. We wonder what endpoints did the authors used as all the subjects in the two groups were diagnosed to have AAD, and no non-AAD patients were included in the study. It seems to us that the dependent variable was not binary or multiple. We have no idea as how the authors assessed the associations between the predictors and the probability of occurrence of AAD.

Third, the prediction nomogram included 9 predictors which were derived from univariate and multivariable analyses. These predictors included gender, age, body weight, hypertension, cardiac surgery, liver cyst, renal cyst, bicuspid aortic valve, and bovine arch. However, laboratory indicators were not included. Our previous studies indicated that multiple inflammatory and thrombotic biomarkers were closely related to aortic dissection [2,3]. The authors of this study should consider including these biomarkers into the model.

Fourth, a few predictive factors in this study should be better explained. For instance, it is ambiguous as to what gender “0” and “1” represented. On the other hand, cardiac surgery “0” accounted for around 45 points. It is hard to understand why a patient without any cardiac surgery had the added possibility of developing AAD.

In conclusion, this study developed a nomogram in predicting the probability of AAD at an ascending aorta diameter below 55 mm. However, it is necessary to clarify the points which we have raised in this Letter to the Editor. Better designed prospective studies to compare the nomogram model in predicting the possibility of AAD with CTA are needed.

Ethical approval

This work was not involved in ethical.

Author contribution

YC and DL conceived of the study design and drafted the manuscript. RZ participated in the study design and helped to revise the manuscript. All authors read and approved the final manuscript.

Conflicts of interest

We wish to confirm that there are no known conflicts of interest associated with this publication and there has been no significant financial support for this work that could have influenced its outcome.

Trial registry number

No research registration number.

Guarantor

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Provenance and peer review

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Data statement

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