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LETTER TO THE EDITOR

Carotid atherosclerosis is associated with left ventricular diastolic function: methodological issue

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Dear Editors-in-Chief,

We were interested to read the article by Harada and colleagues that was published in the Journal of Echocardiography in June 2016 [1]. The authors aimed to clarify the association between echocardiographic findings and carotid atherosclerosis. They used stepwise multiple regression analysis to estimate the effect measure of the associations. The result demonstrated that among the echocardiographic parameters, only early diastolic mitral annular velocity was statistically significantly associated with the presence of severe carotid atherosclerosis ($\acute{e}$) [1].

Although the statistical methodology used was correct and the data were interesting, some methodological and statistical issues should be considered. Model development using a stepwise selection method has a number of limitations such as overlooking the subject knowledge from previous empirical studies and expert opinion so that a regression model is created based more on statistical approaches than prior knowledge [2]. As the authors point out in their article that $\acute{e}$ is the only predictor of the presence of severe carotid atherosclerosis, this conclusion is actually an optimistic interpretation.

The take-home message for readers is that they should consider clinical judgments when interpreting the presented results.

Compliance with ethical standards

Conflict of interest Erfan Ayubi and Mohadeseh Sani declare that they have no conflicts of interest relevant to the content of this letter.

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