

## Reply to the letter to the editor concerning: ‘Relationship between increased carotid artery stiffness and idiopathic subjective tinnitus’

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To the Editor,

We thank the authors for their valuable evaluation of our article entitled “Relationship between increased carotid artery stiffness and idiopathic subjective tinnitus” published in *European Archives of OtoRhino-Laryngology* in 2017 [1].

First of all, the authors are right about the details of multiple regression analysis, but we also conducted both steps as they mentioned. Since the lack of the issue that the variables for unadjusted  $p$  values  $<0.10$  were identified in multivariate logistic regression analysis is not specified in the statistical analysis section, we thank you for your attention in this matter.

The Variance Inflation Factor (VIF) and tolerance are both widely used measures of the degree of multicollinearity of the independent variable with the other independent variables in regression models. A tolerance of less than 0.20 or 0.10 and/or a VIF of 5 or 10 and above were shown to indicate a multicollinearity problem [2]. In the statistical program we use (SPSS), VIF and tolerance values are used to detect multicollinearity in linear regression analysis; however, in the logistic regression analysis the “correlation of estimates” test automatically removes those

from the analysis. When we perform a correlation analysis (Spearman or Kendall tau) between the relevant variables, the coefficient of  $r$  is lower than 0.7 for all variables. According to these results, there is no multicollinearity in our study; for this reason we did not need to perform any regression modelling to find the association between the variables with moderate to high degree of tinnitus.

Second, we stated in the method section that the systolic and diastolic blood pressures were recorded after 5 min of rest. Since our study design was cross-sectional, we performed these measurements before the Doppler ultrasonographic examinations to exclude the individual fluctuations for the blood pressure. Even though we have not specified this deficiency in the text, we have done these measurements at least three times from each arm and have received the highest average of three measurements. So, we did not think any regression dilution bias to our manuscript.

### References

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