Reviewer’s report

Title: SOD2 gene Val16Ala polymorphism is associated with macroalbuminuria in Mexican Type 2 Diabetes patients: a comparative study and meta-analysis

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Reviewer: Maria E Tejero

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Major compulsory Revisions

The authors report a significant association between genetic variation in SOD2 and macroalbuminuria. The rationale for this association is the effect of this antioxidant enzyme on the development of diabetic nephropathy, the analyzed association has been observed in other populations, giving support to their findings. However, the authors do not mention the limitations of their study. There are many confounders that are not considered in the manuscript such as variation in other enzymatic and non-enzymatic antioxidants of different sources, practice of regular physical activity, type of diabetes medication, duration and intensity of smoking. Some of these variables are difficult to analyze, however the possible contribution to the observed results should be discussed.

The discussion is focused on the genetic analyses, and does not elaborate on other interesting results such as those presented in Table 3, showing data of the logistic regression. What is the contribution of the analyzed genetic variation in SOD2 within the proposed model?

Minor comments

The authors mentioned that no evidence of urinary tract infection, hematuria, acute febrile illness, vigorous exercise and acute heart failure were observed in all the participants, how was this determined?

It would be of interest to present information on other DM2 abnormalities related to oxidative stress, such as retinopathy or neuropathy in the compared groups.

It calls attention that current and previous smoking has an OR of 0.407.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.
Declaration of competing interests:

I declare that I have no competing interest