Reviewer’s report

Title: Prevalence of Diabetic Retinopathy in Tehran Province: A Population-Based Study

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Reviewer: Mohsen Janghorbani

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The manuscript by Rafati et al. is aimed at describing the prevalence and risk factors of diabetic retinopathy among an Iranian population with T2DM. The study is based on the ophthalmology examination of 639 people with type 2 diabetes screened in First National Survey of Risk Factors for Non-Communicable Disease in Tehran, Iran. Authors reported that the prevalence of any retinopathy among this population of T2DM was 37.9%. Prevalence of retinopathy was higher in men, oral and insulin treated diabetes, older persons, hypertension, and higher duration of diabetes and history of diagnosed nephropathy than patients without retinopathy. The authors thus conclude that retinopathy is highly prevalent in these patients with type 2 diabetes. This paper has some significant weakness that limits the overall message. There are also problems in analysis and interpretation outlined below. Overall I believe the contribution of this study to the extent literature is marginal at best.

1. The 7th JNC criteria used for hypertension are not for hypertension in people with diabetes. The definition of hypertension for diabetes based on 7JNG is systolic blood pressure #130 and/or diastolic blood pressure #85 mm Hg or patients treated with antihypertension medication. In this study the criteria for hypertension in non-diabetic subjects were used.

2. The recruitment procedures should be given more detail, if possible. How were the patients recruited, did all accept to participate who fulfilled the inclusion criteria? How many were excluded and for what reasons. This information is important when the results are to be compared with other reports of prevalence of retinopathy in diabetes.

3. Tables should be presented for men and women separately.

4. In Table 2 and throughout the text, the prevalence of DR, NPDR and PDR should be calculated based on population at risk. For example in Table 1 prevalence of NPDR is 25.9% (90/347) not 51.4%. In the same table all percentages should be check again. In abstract the prevalence of NPDR is 27.4 (175/639) not 72.9%, etc.

5. Table 3 present risk factors of retinopathy, columns beta, SE, and P should be removed and a column of odds ratio and 95% CI after age adjustment should be added.

6. Complete list of covariate entered in logistic regression should be stated in
statistical analysis section.

7. I am suggesting comparing characteristics of men and women to find if there are any differences.

8. The age-, sex-specific prevalence should be presented.

9. It would be desirable to include the following reference since they concern the prevalence and incidence of DR and related risk factors in Isfahan (second largest city of Iran). Reference:


10. The prevalence of T2DM seems high for this population (9.5%). It could be due to use of single fasting blood glucose. For diagnosis of diabetes at least 2 FBG are require. This issue should be arising in Discussion section.

11. The authors need to carefully check the language.

Level of interest: An article of limited interest

Quality of written English: Needs some language corrections before being published

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 interests.