Reviewer's report

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

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Reviewer: Jill E Keeffe

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One of the strengths of this study is the sample size and its selection to provide a representative population-based sample of urban and rural adults in Iran. The response rate was high.

Major compulsory revisions:

The clinical grading was conducted by a single grader. There was no comparison with another experienced grader to determine sensitivity and specificity. Also assessment of temporal reliability is recommended. As these were not reported, the limitations of clinical grading without assessment of performance should be discussed as a possible limitation.

In the section on variable associated with DR, the term “grading of retinopathy” is used. Is this the “grade” rather than the process of grading?

Minor Essential Revisions:

The need for treatment is mentioned; what were the indications for treatment in addition to high risk retinopathy in people with PDR.

Age and duration of diabetes are shown as significant factors in severity of DR. As these are possible confounders, did the analysis for duration of diabetes control for age? The association between vision and severity of DR was stated as being significant – the data should be shown.

The Discussion includes a review of different methods and possible reasons for different figures for prevalence of DR. Issues that were not included that are important were the different methods of examining the fundus (clinical vs imaging) and the grading schemes for categorisation of DR. The poor values for imaging to detect macular oedema are given; this is improved significantly if testing of visual acuity is included with imaging to detect macular oedema.

Discretionary Revisions

In the Introduction references 2 (projections) and 7 (treatment are about a decade old. With the very comprehensive recent literature on diabetes and treatment of diabetic retinopathy, more recent references are recommended.
Level of interest: An article of importance in its field

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'