Reviewer’s report


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Reviewer: Rajiv Khandekar

Comments for Authors

Dear Authors

I congratulate for this study on an important and upcoming issue about diabetic retinopathy from public health point of view. By adopting following suggestions and amending the manuscript, the article will become more meaningful.

Abstract:

Introduction:

• Pge:2 line 1. Pl change the sentence like this ‘diabetes is one of the leading causes of blindness.’

• The aim should be to estimate the prevalence and determinants of DR among diabetics.

Methods:

• When you say randomly selected then you should say from how many diabetics.

Conclusion:

• 19% is suggested ‘high’. WHO estimates are nearly 20%. Buraimi study is showing 42%. So this adjective ‘high’ should be removed.

Introduction

• In the introduction you have stressed on the literature review related to relation of duration of diabetes with the magnitude of DR. But you have not shown this important variable in your results and discussion.

• It would be good if you give profile of the study area, Al Ain, UAE, its population and health services including that of Buraimi and private sector. Thus it will give good idea to the readers if your sample from one hospital is representative of Al Ain diabetics or not.

• In a prevalence study main important aim is to identify the magnitude determinants and propose public health policies. Last two are missing from objectives of your cross sectional study and should be included.

Methods:

• The health services in Al Ain are composed of govt, university hospitals and private sector. In addition many patients of UAE might visit Buraimi hospital for their eye and diabetes care in this situation argument that random selection method of sample will represent population of diabetics in Al Ain medical district is not convincing.

• Please put up the argument why it should not be considered hospital based study of those knowing about their diabetes and had visited these institutions during the study period. Your study does not include cases having diabetes and not visiting your institution. It is not community based hence the DR prevalence will be of Al Ain district is not correct.

• What is the magnitude of diabetic persons of Al Ain Health district? What was the assumption and how the sample size of 600 was justified to represent the population of diabetic persons? These should be
Method of collecting information on variables related to diabetes was interview of the patients and not the review of the data. This is weakness of your study. Recall bias could influence the outcome of these variables.

Do you have information on HbAc1 values of these diabetics visiting health institutions. They will enable to give more reliable information of glycemic control instead of asking patient about compliance with treatment.

How did you collect information on anterior segment and glaucoma? What type of fundus photography facilities are available in all centers. Are they digital cameras? How did you interpret the findings? All these points need clarifications.

What was the method you used to address the problem of inter-observer variation?

Please give the reference of classification/definitions of different stages of DR you have used.

Dense cataract and blind were considered to have diabetic retinopathy. In result section please mention how many such cases with cataract and blind were included in calculation of DR magnitude. In discussion also you should mention the possibility of overestimation if all persons with cataract and blindness actually did not have retinopathy.

Clinical variable and DR were associated in the analysis. Please mention and define all the clinical variables you analysed.

What type of analysis was performed univariate or multivariate?

Results:

Let the reader decide if it was representative sample rather than you stating it. For this you should give the profile of registered diabetics and your examined sample.

In Table: 1, just give variant name numbers and percentage proportion in each raw. No need of 95% CI.

The prevalence of DR is your main outcome. Kindly give it in Table form (Now Table: 2) In it, you should mention the variable, number of persons with DM and # of persons with DR. You then add prevalence rate with its 95% CI.

It would be interesting to study trends of DR by gender, age group and nationalities. The profile of study population you have given in table: 1 should be used to give their relationship with the magnitude of DR.

You have good data to study the risk factors of DR in your study sample. By taking help of statistician you can perform binary logistic regression analysis and get the adjusted Odd’s ratio of different risk factors with their 95% CI. You should include the duration of diabetes as one risk factors in this analysis. (Table: 3)

Correlation of DR with other complications of DM could be influenced by the duration of Diabetes and the glycemic control. Please mention the confounding role of these two factors and discuss their effects on the association of DR and other complications you have presented.

Discussion

Diabetics are reported to be the risk factors for visual impairment 20 times more than general population in this area. (in Oman) but bilateral blindness was not that common among registered diabetics. In this regards, your study area that is adjoining to Oman, you should justify your hypothesis that DR could be the leading cause of blindness in adults of UAE. (it could be for low vision but not blindness)

You have studied only Al Ain District. How you can extrapolate your result to UAE?

You have compared the prevalence of UAE with US but how about giving rates in Arab countries, neighboring countries. In fact a study in Buraimi in BJO is not referred!

You must give reasons for the differences and similarities of DR rates in your study compared to them.
• You have not shown rise of DR by age and duration in your result but your discussion mentions it this is not correct. Please include them in your results.

• The discussion should focus on your results and then do the literature review of similar variable studied in other parts of world. Justify similarities and differences.

• You have not studied the cost of DR screening so please remove the paragraph related to it and the related references from bibliography (18 and 19).

• Kindly propose public health policies and measures to improve the eye care of diabetics.

References:

Please take each of your reference to (entrez-pubmed or Highwire) and get accurate references that could be included in BMJ.

Tables:

• Table should have only horizontal lines

• Numbers percentages and 95% CI should be in separate columns.

• None of the tables or results shows chi square values as suggested in methods.

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article of importance in its field

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

Statistical review: No

Declaration of competing interests:

'I declare that I have no competing interests'