Reviewer's report

Title: Common genetic variants are associated with type 2 diabetes in urban Ghana: a hospital-based case-control study

Version: 2 Date: 13 August 2013

Reviewer: Per Medbøe Thorsby

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The authors have tried to address my major concern on selection bias, especially in the control group: “To use unmatched controls may influence on the genetic risk observed. Since these controls were younger and may also differ from the cases in anthropometrics, ethnicity and SES background that may influence heavily on diabetes prevalence. Also to use only 50% of controls compared to cases may give rise to selection bias.”

Still this is a major limitation in the present study even though they have corrected for age in their analysis, one would suspect that some of the persons in the control group actually will have increased FBG and probably diabetes when older and with higher weight.

As the study is designed, the control group represents “super controls”; younger, slimmer, less hypertension and higher SES. And the difference in allele frequencies between them and the patients may have been overestimated and may represent a type I statistical error.

Other comments of my first review are properly addressed.

One minor concern to the present manuscript: the part in the discussion on technicalities on genotyping should be moved to the methods part.

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

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

I declare that I have no competing interests