Reviewer's report

Title: PKLR rs3020781 and NOS1AP rs7538490 in relation to type 2 diabetes, obesity and related metabolic phenotypes in a Danish large-scale study: case-control studies and analyses of quantitative traits

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Reviewer: swapan K das

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PKLR rs3020781 and NOS1AP rs7538490 in relation to type 2 diabetes, obesity and related metabolic phenotypes in a Danish large-scale study: case-control studies and analyses of quantitative traits

by Camilla Helene Andreasen et al.

Comments

This article attempted to replicate the association of intronic SNP rs3020781 of PKLR gene and SNP rs7538490 of NOS1AP gene with Type 2 Diabetes using a large case-control study design in Danish Caucasians. Authors also attempted to analyze the association of these two SNPs with obesity and T2DM related quantitative metabolic traits.

These SNPs showed significant association in an article published by Wang et al (2002) and in conference abstracts published by International T2DM chromosome 1q consortium. PKLR and NOS1AP were not replicated by recently published genome wide association studies for T2DM or related metabolic traits in European origin cohorts.

Authors used suitable laboratory and statistical methods to analyze and interpret results.

• Major Compulsory Revisions
  None

• Minor Essential Revisions

1) Authors used samples from 4 different cohort for case-control and quantitative trait analysis. Average age, BMI etc of these cohorts are different. These differences are very hard to follow from description given in “subject” section. Authors should provide detailed tabular representation of cases and controls used from different cohorts and also provide similar tabular details of samples used for quantitative trait analysis.

2) Remove or revise the first sentence of last paragraph of introduction “.. first
intending to replicate..”. This is not very important to claim this point to attract reader.
3) Check punctuation in last 2 lines of subjects section.
4) Description of determination of BMI is elaborate. Please make it brief.
5) Please indicate the PKLR and NOS1AP SNPs typed in published GWA studies. If SNPs analyzed in this study or SNPs in LD with these two SNPs were in GWA studies?
• Discretionary Revisions
  None

**Level of interest:** An article of limited interest

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**
'I declare that I have no competing interests'