Reviewer's report

Title: HLA-DQA is associated with abdominal aortic aneurysms in the Belgian population: a case control study

Version: 1 Date: 26 May 2006
Reviewer: Christian Götting

Reviewer's report:

The authors analyzed in the presented study the association of HLA alleles with the occurrence of abdominal aortic aneurysm in a Belgian and a Canadian cohort. They found a statistical association of the HLA-DQA locus with AAA in Belgian males which was not present in the Canadian cohort. Study design and analysis of the results are appropriate and well presented. However, there are some issues that should be addressed in a revised version of the manuscript.

Major compulsory revisions:
- The patients’ cohort is not well defined. Is further information on the patients’ characteristics available, especially on further AAA risk factors? This should be presented in a table including a statistical analysis for each parameter in the patient cohorts. This information might be helpful for elucidating the reasons for the occurrence of the statistical association of HLA-DQA and AAA in Belgian males and not in Canadian patients. Have the authors looked at the potential occurrence of Marfan or Turner syndrome in the cohorts?
- A calculation of the relative risk / odds ratio for the risk allele should be performed. Furthermore, the power of the study cohort has to be calculated and discussed.
- A description of the accuracy of the genotyping methods and the whole-genome amplification should be added or the corresponding references may be cited if the methods were performed without any modifications.
- The authors mention in the “Study limitations” (p. 13) that they have not adjusted for multiple testing. However, the adjustment for multiple testing is necessary in order to avoid false-positive associations which only occur by chance due to the multiple testing of the same cohort. These analyses should be added.

Discretionary revisions:
- p. 6, 2nd paragraph, lines 3 ff.; adjust font size
- p. 11, 2nd paragraph, line 10. delete blank “(TIMP1)”
- p. 14, line 3, insert blank “humans [43].”

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

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

Quality of written English: Acceptable

Statistical review: Yes

Declaration of competing interests:

I declare that I have no competing interests.