Reviewer’s report

Title: Mitochondrial DNA haplogroup T is associated with coronary artery disease and diabetic retinopathy: a case control study

Version: 1  Date: 7 November 2008

Reviewer: Tomohiro Katsuya

Reviewer’s report:

Kofler B et al examined the effect of different mitochondrial (mt) DNA haplogroup on the susceptibility of coronary artery disease (CAD) and diabetic retinopathy using cases and controls in Austria, resulted that mt DNA haplogroup T was significantly increased the risk for CAD and diabetic retinopathy. The result obtained is unique and interesting and the number of subjects examined seems to be enough to consider the statistical significance in the genetic association study. The following comments are minor but should be responded appropriately.

Since mt DNA is an important confounding factor of aging, the difference of mean age among the subgroups is impossible to overlook. Even though the authors carried out the adjustment for age and sex, the mean age vary a great deal in groups. If the authors matched age and sex between case and controls, did the authors get the same results?

To examine the effect of mt DNA haplogroup, it seems to be important to show the interaction between haplogroup and clinical characteristics of subjects. Is it possible to show it as a table?

In discussion, the authors suggested the possibility of the association between haplogroup T and inflammation. Was there any suggestive data to prove it? For example, the measurement of high sensitive CRP, homocysteine and small dense LDL are useful.

The authors commented the difference of the results in the comparison with recent study from Denmark. For the better understanding, raw data to compare the frequency of haplogroup should be shown in the results or discussion section.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.