Reviewer's report

Title: The interactive role of diabetes mellitus type 2 and E-selectin S128R mutation on coronary heart disease manifestation

Version: 1 Date: 28 February 2007

Reviewer: Carmine Gazzaruso

Reviewer's report:

The study by Abu-Amero and colleagues aimed at investigating whether E-selectin S128R alleles are able to increase the risk for coronary artery disease (CAD) angiographically documented in diabetic and non diabetic patients. The authors found that the presence of R mutant allele does not seem to be associated with angiographic CAD in non diabetic subjects, while the association between S128R alleles and CAD appears to be strong in diabetic patients. The approach is very interesting. Indeed the authors want to assess whether a genetic trait is able to increase the cardiovascular risk in patients at high cardiovascular risk. The study population is sufficiently large. Nevertheless there are some methodological problems that should be overcome.

Major Compulsory Revisions
The study groups should be well characterized. Clinical and demographic features of patients and controls should be given. Indeed traditional cardiovascular risk factors (such as lipids, hypertension, obesity in the whole populations, and diabetes control in diabetic patients) can affect the results. Some medications, such as statins and some antihypetensive drugs, can reduce the cardiovascular risk. So other variables should to be considered in univariate analysis. In addition multivariate analysis is needed to explore the impact of other variables on the association between E-selectin S128R mutation and CAD.

The authors should clarify how type 1 diabetic patients were excluded from the study.

The exact meaning of “no significant CAD” should be clarified. Indeed a patients with a coronary stenosis <70% but near to 70% cannot be considered as a control.

In any case, CAD extent should be considered. The number of vessels diseased or a scoring system, such as the Gensini one, could be used.

Minor Essential Revisions
In the title and in the text the term “manifestation of CAD” should be changed to “CAD” or coronary atherosclerosis”, since the study does not refer to clinical presentations of angiographic CAD.

“Diabetes mellitus type 2” should be changed to “type 2 diabetes mellitus”

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

Declaration of competing interests:

'I declare that I have no competing interests'