Reviewer's report

Title: Atherosclerosis Profile and Incidence of Cardiovascular Events: A Population-based Survey

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Reviewer: Manfredi Rizzo

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The present study is of interest, since it deals with an important topic, i.e. the importance of early identification of subjects at high cardiovascular risk for a better management of measures of cardiovascular prevention.

The background for the present study is well explained, highlighting the importance of improving cardiovascular health through prevention, detection and treatment of risk factors. In addition, the authors correctly mentioned the clinical significance of identifying individuals with subclinical atherosclerosis before a cardiovascular event occurs.

Results are of interest too. The authors performed different analyses: 1) comparing the clinical characteristics of subjects reporting a diagnosis of subclinical atherosclerosis vs. those without atherosclerosis at baseline; 2) identifying predictors of subclinical atherosclerosis; 3) comparing subjects with and without subclinical atherosclerosis at baseline but who experienced a cardiovascular event during the 2-year period of follow-up. The regression analysis shown in Figure 1 is also very informative.

In the Discussion the authors correctly stated the several potential limitations of the present study, particularly the fact that all the clinical determinations (such as the determination of atherosclerosis, cardiovascular event, dyslipidemia, hypertension or diabetes) were based on self-report rather than clinical or laboratory measures.

Discretionary Revisions

The study could be improved by further statistical analysis (that could be reported only in text as “data not shown”): the authors may perform further regression analysis (as shown in Figure 1) in subgroups of subjects with subclinical atherosclerosis and diabetes, dyslipidemia, hypertension, obesity or with current smoking habit. It could be of interest to assess whether the relative risks shown in Figure 1 may vary in subgroups of subjects. Due to the large cohort of subjects included in the study, this may be worth of analysis.

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

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

Declaration of competing interests:
I declare that I have no competing interests.