Reviewer's report

Title: Prevalence of atherothrombosis in a general population sample of adults in Greece; An observational study

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Reviewer: Vasilios G Athyros

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The original paper 1482555996496206_article BMC Cardiovascular Disorders by Maniadakis N, et al “Prevalence of atherothrombosis in a general population sample of adults in Greece; An observational study” has relevance to the audience of this journal.

The aim of this study was to estimate the prevalence of atherothrombosis and selected traditional risk factors in Greece, in order to obtain data for the estimation of the economic burden of the disease in this country.

The study included 3,007 men and women from all Greek regions participated in a random-digit dialed (RDD) telephone survey (observational study). Overall, 6.5%, 17.7% and 14.0% of participants reported that they had been diagnosed with diabetes mellitus, hypertension and hypercholesterolemia, respectively, and/or were under treatment for those conditions. In the total sample, 2.5% of participants reported that they had been diagnosed with angina, 2.0% with myocardial infarction, 1.6% with stroke and 2.5% with peripheral artery disease.

The authors suggest that atherothrombosis affects a large portion of the population in Greece and is expected to impose a significant economic burden. Therefore, specific programmes aiming to primary prevention of atherothrombosis should be developed and implemented.

Comments

This is a cross sectional observation confirmation study.

1. Is the question posed by the authors well defined?
   Yes

2. Are the methods appropriate and well described?
   Yes
   The use of random telephone interview is not probably the best method to find a representative sample of general population. There might incur a patient selection bias.

3. Are the data sound?
   Yes

4. Does the manuscript adhere to the relevant standards for reporting and data
No. The paper reports very low prevalence of CVD risk factors and overt CVD cases. In other studies from Greece (ATTICA, EPIC, and MetS-Greece) the prevalence of these CVD risk factors and overt CVD cases are much-much higher.


ATTICA included 1128 men and 1154 women, and 46% of men and 40% of women had total serum cholesterol levels >200 mg/dl. Of them, 40% of men and 30% of women were unaware of their condition. Twenty-one percent of men and 7% of women had HDL–cholesterol levels <35 mg/dl.


In this study that included 4,153 subjects, 2,574 (62%) had dyslipidaemia.


The prevalence of hypertension in 26,913 adults is 40.2% for men and 38.9% for women (age-adjusted to the adult Greek population of 2001). In the sample examined, awareness among hypertensives is 54.4%, pharmaceutical treatment among those aware is 83.9%, and effective control among hypertensives is 15.2%.


The fully adjusted prevalence of vascular disease in those with the MetSyn (n = 984) was 29.4%, significantly higher than in those without (n = 3169, 9.6%, p < 0.0001), while subjects without both the MetSyn and DM had the lowest vascular disease prevalence (n = 3035, 8.9%). Subjects with the MetSyn but no DM (n = 674) had a vascular disease prevalence of 24.1% (p < 0.0001 vs. those without the MetSyn), which was similar to that in subjects with DM without the MetSyn (n = 134, 25.4%), but lower than in those with both the MetSyn and DM (n = 310, 40.7%, p < 0.0001 vs. all).

Thus, it seems that data reported in this paper were those that patient knew. This is self reported prevalence and can not be used as a basis to evaluate treatment costs (to evaluate the economic burden of the disease in this country) as stated by the authors. This is because real the prevalence of CVD risk factors and the real number of patients with overt CVD are much higher. Therefore, even the title should change and say (Self reported prevalence of atherothrombosis in a general population sample of adults in Greece; An observational study).

5. Are the discussion and conclusions well balanced and adequately supported
by the data? Yes, but some greater emphasis should be put on study limitations.
6. Are limitations of the work clearly stated? Some greater emphasis should be put on study limitations.
7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished? Yes.
8. Do the title and abstract accurately convey what has been found? The title must be changed (please see above).
9. Is the writing acceptable? Yes

**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.

**Declaration of competing interests:**

I declare that I have no competing interests