Reviewer’s report

Title: The influence of family history of Hypertension on disease prevalence and associated metabolic risk factors among Sri Lankan adults

Version: 2 Date: 8 April 2015

Reviewer: Rodolfo Valdez

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The authors examine data on hypertension and its family history from a population-based survey (n=5,000) among adults from Sri Lanka. They found that among those with a positive family history of hypertension the prevalence of the disease was higher than among those without such family history. They also found that the strength of this association grew with the presence of hypertension across generations and that family history of hypertension increased the risk for associated conditions (obesity and metabolic syndrome).

These are my comments:

Minor:
1. The definitions of hypertension and obesity (page 7, lines 18–25) need references.
2. The authors have an opportunity to test for recall bias (controlling for or stratifying by age, is a positive family history of hypertension more common among previously diagnosed than among newly diagnosed cases of the disease?). It is possible that previously diagnosed cases are more likely to recall relatives with the same condition.
3. Tables 1, 2, and 4 need the sample size for each column.
4. The number of subjects with family history information on grandparents is small. Not enough for the strong conclusion about the graded nature of the association between family history and hypertension and other conditions.

Major:
1. The ranking of familial risk by generations may not be the best option. This risk is better expressed by degree of relationship (first or second degree relatives) and the age at onset of the disease (early onset signs a higher risk). Probably the authors don’t have age at onset of hypertension among relatives but early onset in their subjects may be related to a strong familial risk. I would like to encourage the authors to use a risk stratification based on degree of relationship. There are several score systems, which are actually better to show the graded relationship between family history and risk of disease. For example, see the following website and check the reference if possible.
2. The tables are confusing in the sense that they present the data by hypertension status (subdivided by family history status). Patients with hypertension should be excluded from some or all of these tables. By definition, family history of a disease is no longer a risk factor when the person already has the disease. Yes, the authors can use the cases of hypertension to examine the influence of family history on the prevalence of the disease; but when they examine how the other risk factors (metabolic, anthropometric, clinical) relate to family history of hypertension, they must exclude the cases of previously diagnosed hypertension and simply examine among the rest the differences between those with a positive and those with a negative family history of hypertension.

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

**Quality of written English:** Acceptable

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I declare that I have no competing interests