Reviewer’s report

Title: Prevalence and determinants of a normotensive blood pressure in a German population based cohort of hypertensive study participants

Version: 2 Date: 27 August 2012

Reviewer: Ulf Lindblad

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The authors utilized a German population sample examined twice with a 5 year period in between to explore prevalence, treatment and control of hypertension. They found that the prevalence was higher than in other comparable Western countries, and the treatment and control was very low. Female sex and having antihypertensive combination therapy were associated with reaching blood pressure targets, while increasing age, having risk-comorbidities and obesity were negatively associated with reaching target values.

GENERAL COMMENTS

These results are interesting and add to the common knowledge on differences between countries in the prevalence, treatment and control of hypertension. They conclude that a better adherence to therapy guidelines, monitoring of blood pressure development, and individualized feedback to the patients may improve the situation. There are, however, important limitations in the presentation and conclusions.

MAJOR COMPULSORY REVISIONS

1. The paper would improve much if the text were focused excluding many details in the Background. Avoiding duplicate presentation in tables and Results as well as repeated results in the Discussion would improve flow and keep the readers interest. Professional review of the English language is also recommended.

2. I am not clear over the design of this study. In Table 1 the total number of patients in the SHIP-0 cohort is 3278, while the number of the same cohort in Table 2 is 1761. Further, in Table 5 the total is 1074. A flow-chart would be needed to guide the reader to understand what is going on.

3. The difference in total number between Table 1 and Table 2 is presumably due to different target populations; presentation of a baseline survey in Table 1 while only those participation in both surveys are kept in Table 2? This has to be sorted out.

4. If the assumption in item 3 is correct about 1500 patients were lost to follow-up and the reasons for that should be presented and discussed.

5. Typically studies on the prevalence, treatment and control are based on
cross-sectional surveys. It's not clear to me what the SHIP-1 adds to this study. It says that the information on treatment is observed over the 5 years to SHIP-1, however, what kind of longitudinal observations were actually analysed? If the 2 surveys are to be optimally utilised some change in status should be presented, but I cannot find any.

6. I think blood pressure #130/#80 mm Hg in association with risk-comorbidity confers an overestimation of the prevalence of hypertension in an epidemiological study. In a clinical setting it would be more reasonable. Thus, a major part of the patients in this study were recruited that way and I do not rely on that.

7. There are 7 tables and that is at least 3 too many. That is consistent with a need of condensed text (30%) and a reduction in details and repeated information.

8. The conclusions are in general not based on findings in the current study, but rather speculations based on assumption, or in the best of findings in other studies. These speculations have to be taken out or corrected.

MINOR ESSENTIAL REVISIONS

Beta-blockers were the most common medication for treatment of hypertension in this study. This is in contrast to current recommendations and the outcome from several meta-analyses. This observation calls for a comment.

DISCRETIONARY REVISIONS

None

/Fin

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

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'