Reviewer’s report

Title: Frequency and Co-prescription Pattern of Chinese Herbal Products for Hypertension in Taiwan: a cohort study

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Reviewer: Jung Nien Lai

Reviewer’s report:

The authors presented the results of a study on the using of CHPs in Taiwan among hypertension population using National Health Insurance Research Dataset (NHIRD). The main findings were (1) There were 123,240 (80.0%) patients ever receiving CHPs at least once during the study period. (2) The most frequently used CHM was Tian-Ma-Gou-Teng-Yin, and the most frequently co-prescribed single herb was Dan Shen.

- Major Compulsory Revisions (which the author must respond to before a decision on publication can be reached)

1. The aim of the present study is not clear. The writing did not focus on the hypothesis which is concern about the co-prescription between formulae and single herbs. The present study found that the most frequently co-prescribed single herb was Dan Shen which provided meaningless information for hypertension care. What this particular co-prescription pattern did authors suppose raising concern among either TCM community or public?

2. The aim of the present study is also not clear on the hypothesis about the co-prescription pattern. The present study found at least three types of patterns such as formulae-single herb, formulae-formulae, and single herb-single herb. What these particular co-prescription patterns did authors suppose raising recommendations or explanations for TCM community or medical community?

3. The definition of co-prescription pattern is not clear. Authors mentioned in the MS that the purpose of the CHP prescription is for either hypertension related symptoms or medication-related side effects. The writing did not discuss these two different purposes separately. Different types of antihypertensive therapies might co-prescribe with different formulas which provided meaningful information for hypertension care. Authors should take this difference into consideration in the present MS.

4. The definition of frequency is not clear. Authors did not evaluate the frequency of antihypertensive therapy among non TCM users and CHP users. It is not clear that the frequency of CHP prescription is complementary or alternative medication for hypertension. If CHP is alternative medication for hypertension, the present study focus on the hypothesis which particular prescription pattern is suggested in treating hypertension or hypertension-related symptom. If CHP is complementary medication for treating hypertension, then the present study had better focus on the hypothesis which is concern about the herb-drug interaction
or integrative medicine.
5. The writing of the study design and patient selection is not clear, which raised a big concern about the validation of the study method. When was the end of follow-up? How to calculate the using of CHP? Compared with those with shorter observation period, patients with a longer observation period have a higher chance to use some drugs. Did TCM nonuser and CHP user have the same observation period? Besides, the definition of variables in Table 1 was also unclear.
6. Define Chinese herbal product and CHP the first time it appears in the MS.
7. The aim of the present study is to describe the frequency and co-prescription of CHP for hypertension. I recommend analyzing CHP users rather than TCM users in Table 1 and Table 2.
8. Among 123,240 TCM users, between 2003 and 2009 in Taiwan, only 81,582 outpatient visits with hypertension related were prescribed CHPs by TCM physicians. Authors should further analyze the background of study population.
9. Why not examined the association between CHP use and some demographics?

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)
1. Table 2 provide less information in this Discussion.
2. I recommend authors resubmit their paper after revising the aforementioned comments with the format of short communication.

When assessing the work, please consider the following points:
1. Is the question posed by the authors well defined?
   Ans. No
2. Are the methods appropriate and well described?
   Ans. Partly
3. Are the data sound?
   Ans. Yes
4. Do the figures appear to be genuine, i.e. without evidence of manipulation?
   Ans. I do not know.
5. Does the manuscript adhere to the relevant standards for reporting and data deposition?
   Ans. Leave room for improvement.
6. Are the discussion and conclusions well balanced and adequately supported by the data?
   Ans. Leave room for improvement.
7. Are limitations of the work clearly stated?  
Ans. Yes.

8. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished?  
Ans. Yes.

9. Do the title and abstract accurately convey what has been found?  
Ans. Yes.

10. Is the writing acceptable?  
Ans. Leave room for improvement.

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, but I do not feel adequately qualified to assess the statistics.

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