**Author’s response to reviews**

**Title:** Epidemic investigation of benign prostatic obstruction with coexisting overactive bladder in Shanghai Pudong New Area and its impact on the health-related quality of life

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Keong Tatt Foo (Reviewer 1)

1. The disease BPH (clinical BPH) is not "BPO, with symptoms". There are patients with BPO with no symptoms, often leading to chronic retention of urine. So, this category of patients would not have been included in the study population. (Ref: Luo GC, KT FOO, Kuo T, Tan G. Diagnosis of prostate adenoma and the relationship between the site of prostate adenoma and bladder outlet obstruction Singapore Med J. 2013 Sep; 54(9):482-6.

We agree with your point of view and make the appropriate changes.

2. The sentence page 3 line 10 to 12 ) " Some patients have OAB symptoms in the urine storage period, which is known as hyperplasia (BPH) with co existing OAB (ref 3) "Cannot understand the sentence. Need to be revise or deleted?

We have deleted the sentence.

3. BPO diagnostic criteria
   Should not be only on Voiding and post Micturiction symptoms Prostate volume (PV) more than 25gm on transrectal ultrasound Qmax equal or less than 15mls.
   But should include Intravesical Prostatic protrusion (IPP),and there are evidence to suggest that PV less than 25 grams can still have significant obstruction on Urodynamic studies.
We especially agree with you, but it’s a pity that we have not recorded IPP. We admit that this is one of our limitations.

4. In the discussion, it is interesting to note that Emotional state has significant influence in the development of OAB in patient with clinical BPH. Therefore, counselling on mindfulness (meditation) and relaxation exercise such as Qi gong and Tai Chi should be promoted in the management of clinical BPH patients with no significant obstruction. This may be better than medications with the many side effects. If the obstruction is significant with development of inability to store with Max voided volume less than 100mls and high grade3 IPP, than surgical options would be a better modality for management of the disease.

We agree with your point of view and make the appropriate changes.

Reviewer 2

General comments:
1. Trial registration: Rewrite the sentence clearly.
   We had made the appropriate changes.
2. Show the associated p value when you mention significantly different or not.
   We had added p value.

Specific comments:
Background: The authors have mentioned "Currently, the relationship between BPO and OAB remains unclear, and large epidemic investigations of BPO with coexisting OAB are lacking worldwide." Clarify how you concluded this
We searched the literature and found that there were fewer epidemiological data in this area.

Methods:
1. Mention study design and basis of the sample size calculation.
   We have added related information.

Statistics:
1. The authors have mentioned "For quantitative variables with non-normal distribution, group comparisons were performed using a nonparametric test." Elaborate upon the nonparametric test.
   We used Mann–Whitney U test.
2. Results: It would be better to interchange the order of tables 1 and 2 because demographic characteristics (as in table 2) are better in the first table.

Table 1 describes the overall inclusion of the population, as well as general information. Table 2 only describes BPO with coexisting OAB.

Discussion:
1. Rewrite Discussion section with critical evaluation of your findings; just giving background information and repeating results are not sufficient.

   We have rewritten the discussion.

2. The authors have mentioned "In contrast, chronic bronchitis or chronic obstructive pulmonary
disease, hypertension, coronary heart disease, and cerebrovascular disease did not significantly impact the morbidity of BPO with coexisting OAB" but they have not shown this information in any of the tables. So, either keep that information in table or discard this statement.

We discard this statement.

3. The statement 'smoking and drinking were not associated with the prevalence of BPO' mentioned in the sentence "Furthermore, the present results show that the morbidity of BPO with coexisting OAB is lower in highly-educated participants compared to that in participants with less education, while smoking and drinking were not associated with the prevalence of BPO" is not shown in the Results section.

We discard this statement.

4. * It is better to keep the paragraph "Patient-reported outcomes (PROs) refer to any report from … OABSS score is highly correlated with the IPSS score" in the Background section.
* It will be better to keep the paragraph "The HRQoL is an assessment of how an individual's well-being … used to translate the original KHQ into Chinese[22,23]" under Background section.
* It is better to keep the paragraph "BPO commonly coexists with OAB and consequently decreases … rational allocation of health resources can help improve the QoL of patients" in Background section with the reduction of the unrelated descriptions.

We have made corresponding changes.

Table 1: Mention exact p values (not just p<0.05). Also, mention p values for all the characteristics (not only significant but also non-significant)

We have added p value.

Tables 1, 3 and 4: Show all significant and non-significant p-values exactly to avoid the potential problem of p-hacking. This researcher degree of freedom may sometimes create problem of the external validity of their findings.

We have added p value.

Table 5: Show b and SE as well. You may keep 'b (SE)' format on one column. It is better to keep the individual education level previously in Table 2.

Table 5 and 6: Show Hosmer and Lemeshow's measure (RL2) or Cox and Snell's measure (RCS2) or Nagelkerke's measure (RN2) as the effect size. Show the confidence interval of the odds ratio.

We have added related information.