

**Re: 31681**

**Title: “Is a Split-dose Regimen of 2 L Polyethylene Glycol Plus Ascorbic Acid Tolerable for an Early Morning Visit to a Health Check-up Center?”**

Dear Pf. Yu,

Thank you very much for your e-mail on December 20, 2016. We wish to thank you and the reviewers for the valuable comments and helpful suggestions.

We are submitting the revised manuscript, on which the changes were highlighted in yellow in response to the suggestions of reviewers. The point-by point response to each comment suggested by the reviewer is given on separate pages that we have enclosed.

We hope that this revised version will fulfill the requirements for publication in the **World Journal of Gastroenterology** and give you satisfaction.

The authors really appreciate the reviewers' invaluable and thoughtful comments and the opportunity to improve the manuscript.

Thank you very much.

Sincerely,

Changhyun Lee, M.D.

Department of Internal Medicine and Healthcare Research Institute, Healthcare System  
Gangnam Center, Seoul National University Hospital, 737 Yeoksam-dong, Gangnam-Gu,  
Seoul 135-984, Korea

E-mail: mdchlee@gmail.com, Tel.: 82-2-2112-5578, Fax: 82-2-2112-5635

## **Reply to Reviewer's comments**

### **Reviewer #1**

**1.** Recommend using a different term than "health check up center"

#### **Reply:**

Thank you very much for your thoughtful comment. **We changed 'health check-up to '(comprehensive) medical check-up.'**

**2.** Recommend changing the efficacy to effectiveness.

#### **Reply:**

Thank you very much for your comment. **We changed 'efficacy' to 'effectiveness' throughout the paper.**

**3.** A randomized study would have been more powerful.

#### **Reply:**

Thank you very much for your important comment. We totally agree with your opinion. However, all examinees of our center make their appointments online or by phone and various departments such as nurses, call center and delivery team are directly involved in bowel preparation, so it is difficult to randomize and selectively guide a large number of examinees. Therefore, despite the limitation of retrospective cohort study, we believe that the results were meaningful.

**4.** How did the authors come with the total number of patients in each arm? Did they do a power analysis?

#### **Reply:**

Thank you very much for your important comment. Actually, we did not describe this because our study was conducted as a retrospective cohort study. However, according to the analysis of bowel preparation data in last 6 months before our study periods, estimated rate of adequate bowel preparation was about 85% in non-split-dose regimen. We assumed that adequate bowel preparation rate will increase upto 90% in split-dose regimen. Using a two-sided t-test, we calculated that a sample of 363 patients would provide the trials with 80% statistical power to maintain a type I error rate of 0.05. Considering about 10% of dropout rate, we reviewed the records of 411 patients. Except patients with incomplete answers, 378 patients were enrolled.

5. The title of the paper needs to be modified.

**Reply:**

Thank you very much for your comment. **The title was changed to “Is a Split-dose Regimen of 2 L Polyethylene Glycol Plus Ascorbic Acid Tolerable for an Early Morning Visit to a Comprehensive Medical Check-up?”**

6. Need to explain why they used ascorbic acid.

**Reply:**

Thank you very much for your important comment. To achieve adequate bowel preparation, polyethylene glycol (PEG) is the most effective and safest regimen. Large volume (4L) of PEG was commonly used previously. Because of intolerance and noncompliance, low volume (2L) of PEG was introduced in combination with several adjunctives such as ascorbic acid (AA), bisacodyl and sodium phosphate <sup>[1]</sup>. Because of the safety and its pleasant taste, we chose AA rather than sodium phosphate and bisacodyl. Low volume of PEG plus AA has become one of the most commonly prescribed bowel preparations for colonoscopy. High dose AA not absorbed in intestine also promotes osmotic diarrhea and compensates reduced dose of PEG. **It was added in the Introduction section: “Because high dose AA was not absorbed in intestine and promotes osmotic diarrhea, so the addition of high dose AA to PEG reduced the solution volume and improved taste <sup>[2]</sup>.” (Page 5, line 8-9)**

## **Reviewer #2**

The intent of the study seems reasonable. The manuscript is well organized.

**1.** The study design is acceptable but a prospective randomized trial would have given the study greater strength.

**Reply:** Thank you very much for your important comment. We answered reviewer #1's same comment (number **3**).

**2.** The authors should explain the rationale of the addition of the ascorbic acid to the bowel preparation protocol.

**Reply:** Thank you very much for your comment. We answered reviewer #1's same comment (number **6**).

## REFERENCES

- 1 Committee AT, Mamula P, Adler DG, Conway JD, Diehl DL, Farraye FA, Kantsevov SV, Kaul V, Kethu SR, Kwon RS, Rodriguez SA, Tierney WM. Colonoscopy preparation. *Gastrointest Endosc* 2009; **69**(7): 1201-1209 [PMID: 19481646 DOI: 10.1016/j.gie.2009.01.035]
- 2 Ell C, Fischbach W, Bronisch HJ, Dertinger S, Layer P, Runzi M, Schneider T, Kachel G, Gruger J, Kollinger M, Nagell W, Goerg KJ, Wanitschke R, Gruss HJ. Randomized trial of low-volume PEG solution versus standard PEG + electrolytes for bowel cleansing before colonoscopy. *The American journal of gastroenterology* 2008; **103**(4): 883-893 [PMID: 18190651 DOI: 10.1111/j.1572-0241.2007.01708.x]