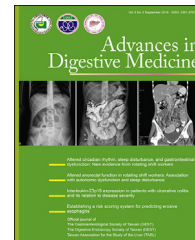




Available online at www.sciencedirect.com

ScienceDirect

journal homepage: www.aidm-online.com



SHORT COMMUNICATION

A modified bowel preparation protocol improves the quality of bowel cleansing for colonoscopy



Wei-Fan Hsu^{a,b,e}, Cheng-Chao Liang^a, Cheng-Kuan Lin^a,
Tzong-Hsi Lee^a, Chen-Shuan Chung^{a,c,d,*}

^a Department of Internal Medicine, Division of Gastroenterology and Hepatology, Far Eastern Memorial Hospital, New Taipei City, Taiwan

^b Institute of Clinical Medicine, National Yang-Ming University, Taipei, Taiwan

^c College of Medicine, Fu Jen Catholic University, New Taipei City, Taiwan

^d Taiwan Association for the Study of Small Intestinal Diseases, Taoyuan County, Taiwan

^e Department of Integration of Traditional Chinese and Western Medicine, China Medical University Hospital, Taichung, Taiwan

Received 4 June 2015; received in revised form 8 September 2015; accepted 21 December 2015
Available online 23 March 2016

KEYWORDS

Bowel preparation;
Colonoscopy;
Patient education;
Visual aids

Summary Adequate colonic cleansing is essential for a high quality colonoscopy. Few studies have investigated the association between patient education and quality of bowel preparation. The control group comprised 165 participants who underwent colonoscopy after a standard bowel preparation protocol during the period September–October 2013 and the study group comprised 251 individuals who underwent colonoscopy after a modified bowel preparation protocol during the period January–February 2014. The modified bowel preparation protocol included an instructional video and leaflet, a dietician-designed 2-day low fiber diet, a follow-up phone message, and information to confirm stool characteristics. The Aronchick Bowel Preparation Scale was used to define the quality of bowel preparation. The endoscopists who performed the procedures were blinded to the preparation protocols. The percentage of participants with excellent bowel preparation quality was significantly higher in the study group than in the control group (35.9% vs. 21.8%, $p = 0.002$). Also, the percentage of participants with poorly prepared bowels was significantly higher in the control group than in the study group (3% vs. 0.8%, $p = 0.042$). Moreover, the adenoma detection rate was significantly higher in the study group (35.1% vs. 24.8%, $p = 0.028$). The results show that the quality of bowel cleansing can be improved by providing patients with a modified bowel preparation protocol.

* Corresponding author. Department of Internal Medicine, Division of Gastroenterology and Hepatology, Far Eastern Memorial Hospital, Number 21, Section 2, Nan-Ya South Road, Banciao District, New Taipei City 22060, Taiwan.

E-mail addresses: chungchenshuan_3@yahoo.com.tw, p98421016@ntu.edu.tw (C.-S. Chung).

Copyright © 2016, The Gastroenterological Society of Taiwan, The Digestive Endoscopy Society of Taiwan and Taiwan Association for the Study of the Liver. Published by Elsevier Taiwan LLC. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Introduction

Colonoscopy is the preferred modality for colorectal cancer screening and adequate colonic cleansing is essential for high quality colonoscopy [1]. However, approximately 20% of patients present with an inadequately prepared colon during the procedure [2]. Poor bowel preparation has been shown to result in a longer procedure time, a lower adenoma detection rate (ADR), an increased incidence of interval cancer, increased cost, a higher rate of colonoscopy-related complications, and the need for repeated examination [2–4].

Adequate colon preparation can be affected by different bowel-cleansing agents [5] as well as the time between starting bowel preparation and the colonoscopy [6]. Patient factors also influence the adequacy of bowel preparation, such as inpatient status, constipation, use of antidepressants, and compliance with cleansing instructions [3]. Few studies have investigated whether patient education on bowel preparation improves compliance with bowel cleansing protocols. Smith et al [7] found that many patients were unable to comprehend written colonoscopy leaflets. Ibanez et al [8] showed that a low fiber diet for 72 hours improved colon preparation; however, their findings were based on an observational study in patients who received more than one colonoscopic examination. In this study we investigated whether a modified bowel preparation protocol as well as a dietician-designed 2-day low fiber diet improves the quality of bowel preparation for colonoscopy.

Methods

Study group

This study was conducted at the health management center of the Far Eastern Memorial Hospital, New Taipei City, Taiwan. The control group comprised 165 individuals who underwent colonoscopy after a standard bowel preparation protocol during the period September–October 2013. The study group comprised 251 consecutive participants who underwent colonoscopy after a modified bowel preparation protocol during the period January–February 2014. Participants in both groups received information from well-trained nurses on proper bowel cleansing procedures. All participants were Taiwanese and were able to comprehend Mandarin Chinese. The dosage of sodium phosphate (NaP) was two bottles of 45-mL drug in 1-L water both the night before and the morning of the procedure, and the dosage of polyethylene glycol (PEG) was 137.155 g (1 bag of drug) in 2-L water the morning of the procedure. All the procedures were performed in the morning (from 8:30 AM to 12:00 PM). In addition, all of the enrolled participants underwent colonoscopy under general anesthesia. Seven endoscopists who participated in this study

were randomly assigned and blinded to the bowel preparation protocols. The colonoscopic system and scope used were the same in both groups (Olympus Evis Lucera Spectrum video system CV-260, Olympus, Tokyo, Japan; colonoscope: Olympus CF-H260AI, Olympus).

Modified bowel preparation

Patients in the control group received a standard bowel preparation protocol, which included a leaflet without illustrations and a diet that did not comprise a dietician-designed 2-day low fiber diet. Patients in the study group received a modified bowel preparation protocol which included: (1) receipt of an instructional video and an illustrated leaflet (Figure 1); (2) a dietician-designed 2-day low fiber diet (<4 g/d; Table S1); (3) receipt of a cell phone message to remind the patients of their dietary bowel cleansing protocol; and (4) information on how to confirm that stool characteristics were appropriate for colonoscopy, and information that a glycerin ball enema should be used if the characteristics of stool samples did not meet those required before the procedure.

Measure of the adequacy of bowel preparation

We used the Aronchick Bowel Preparation Scale to define the quality of bowel preparation as previously reported: a small volume of clear liquid or > 95% of surface seen was defined as “excellent”; clear liquid covering 5–25% of the surface and some semisolid stool suctioned or washed away but > 90% of surface seen were defined as “good” and “fair”; semisolid stool that could not be suctioned or washed away and < 90% of the surface seen was defined as “poor” [9]. The right-sided colon was defined as comprising the ascending and transverse colons and the left-sided colon was defined as comprising the descending and sigmoid colons and the rectum.

Statistical analysis

All data are presented as mean \pm standard deviation for continuous variables. Differences in means of continuous measurements were analyzed with the unpaired *t* test for normally distributed variables and the Wilcoxon test for non-normally distributed variables. The Chi-square test was used for comparison of categorical variables, including bowel preparation quality, ADR, and right- versus left-sided colonic polyps.

Results

The two groups were similar with respect to age (mean \pm standard deviation, 49.04 \pm 10.84 years vs.

Download English Version:

<https://daneshyari.com/en/article/3278509>

Download Persian Version:

<https://daneshyari.com/article/3278509>

[Daneshyari.com](https://daneshyari.com)