Endoscopist Fatigue May Contribute to a Decline in the Effectiveness of Screening Colonoscopy

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Background: Endoscopist fatigue may affect the adenoma detection rate (ADR) during colonoscopy, however, this association has not been directly studied. The purpose of this study was to evaluate whether endoscopist fatigue adversely affects the ADR during screening colonoscopy.

Methods: A prospective, multi-center study was performed on screening colonoscopies performed for asymptomatic subjects between March 2012 and December 2012 in Korea. Endoscopist fatigue was defined and measured by Functional Assessment of Chronic Illness Therapy-Fatigue (FACIT-F) questionnaire. The ADR was compared between fatigued endoscopists and non-fatigued endoscopists, and a multivariate regression analysis was performed to identify independent factors related to the detection of colorectal adenoma.

Results: During the study period, a total of 457 subjects underwent screening colonoscopy. After excluding 62 subjects, 395 subjects were enrolled and their outcomes were analyzed. The overall ADR of the study population was 39.7%. The mean score of FACT-F was 36.4 ± 10.8, and a cut-off score of 25 was chosen to define fatigue. The ADR was lower in fatigued endoscopists than non-fatigued endoscopists (25.0% vs. 42.6%, p=0.008). Using multivariate regression analysis, endoscopist fatigue measured with FACT-F (OR=3.585, 95% CI=1.663-7.728, p=0.001) was found to be an independent variable for the ADR, as well as age, sex, bowel preparation and withdrawal time.

Conclusions: FACT-F score may be a novel measure for endoscopist fatigue, and ADR was adversely influenced by endoscopist fatigue measured by FACT-F. Our results suggest that endoscopist fatigue may contribute to a decline in the effectiveness of screening colonoscopy.

Efficacy and Tolerability of Low Volume Methods for Colon Preparation: A Randomized Prospective Trial

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Background: Low-volume bowel preparations provide equivalent cleansing with improved tolerability compared to standard 4 L polyethylene glycol. However, studies comparing superiority between low-volume bowel preparations are rare, and results are controversial. This study aimed to compare the bowel cleansing quality and tolerability between split-dose methods of sodium picosulfate/magnesium citrate and polyethylene glycol with ascorbic acid.

Methods: A randomized, observer-blinded study was performed. In total, 200 outpatients were prospectively enrolled and received colonoscopy using the low-volume bowel preparation. The Boston Bowel Preparation Scale and Aronchick scale were used to evaluate the bowel cleansing, and bubble scoring was also performed to back up both results. To investigate the preference and tolerability, a questionnaire was administered before colonoscopy.

Results: One hundred patients received SPMC and 100 patients received PEG-Asc. The SPMC group showed superior cleansing quality compared to the PEG-Asc group (8-9 Boston scale score: 40% versus 22.8%, excellent Aronchick grade: 28.5% versus 14.2%, p < 0.05). There were fewer gastrointestinal symptoms and solution taste was better in the SPMC group compared to the PEG-Asc group (p < 0.05).

Conclusions: The SPMC group showed excellent cleansing quality and better tolerability, palatability compared to the PEG-Asc.

Ten Years Follow Up Risk of Colorectal Neoplasia after Initial Negative Colonoscopy

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Background/Aims: In Korea, the surveillance colonoscopy after initial negative colorectal neoplasia is recommended 5 years after negative colonoscopy. We evaluated the risk factors for colorectal neoplasia after negative screening colonoscopy.

Methods: Among the patients underwent screening colonoscopy at Korea University Ansan Hospital from Jan. 2002 to Dec. 2009, the subjects without adenomas were enrolled in the study retrospectively. Baseline characteristics on index colonoscopy and surveillance colonoscopic findings were reviewed. Advanced adenoma was defined as an adenoma that met more than one of the following criterias: a size =10 mm, the presence of a substantial villous component, the presence of high-grade dysplasia. The prevalence of any adenoma and advanced adenoma were identified and the risk factors on surveillance colonoscopy after negative screening colonoscopy were evaluated using by Cox regression model.

Results: Among total 3,516 patients with screening colonoscopy, 1,506 without any adenomas were enrolled. The median of follow up interval after screening colonoscopy was 47.3 months(range:12.0 – 124.8). The incidence of any adenoma within 5years after negative colonoscopy was 293(29.0%) and those of any adenoma from 5 to 10 years was 135(27.2%). The prevalences of same terms in advanced adenoma were 23(2.5%) and 8(1.4%). In cox regression analysis, the prevalence of any adenoma on surveillance colonoscopy were significantly increased in male(P<0.001) and old age(P<0.001). However, male gender and age were not associated with risk of advanced adenoma.

Conclusions: Among the subjects with no colorectal adenoma on initial screening colonoscopy, the incidence of advanced adenomas was 2.1% on 10 year follow up surveillance. Although gender and age is associated with metachronous colorectal adenoma on surveillance colonoscopy, those are not associated with advanced adenoma. Therefore, surveillance interval of colonoscopy can be prolonged to 10 years.