COMPARISON OF LOW VERSUS HIGH VOLUME BOWEL PREPARATION EFFICACY AND TOLERABILITY FOR COLONOSCOPY: A QUALITY IMPROVEMENT STUDY (POSTER PRESENTATION)

Technologies and Procedural Innovation

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BACKGROUND: Successful bowel preparation for colonoscopy is an important factor in ensuring a high-quality examination. Inadequate preparations occur in up to 25% of all colonoscopies, which can compromise the detection and removal of colorectal neoplasia. Low volume bowel preparations have similar efficacy to large volume preparations but are higher cost. In an effort to improve bowel preparation quality, a Veterans Affairs hospital recently switched from a 4-liter polyethylene glycol-electrolyte lavage solution (PEG-ELS) to a 2-liter, low volume PEG-ELS with supplemental ascorbate and sodium sulfate (MoviPrep). As part of a quality improvement project, we sought to determine if this change was associated with an improvement in bowel preparation quality and patient tolerance.

METHODS: From September 2018 to August 2019, an optional survey was administered to all patients upon arrival for colonoscopy. This survey included preparation type, standardized measurements of how much preparation was completed, and standardized questions assessing patient tolerance and experience. All endoscopists were asked to watch a Boston Bowel Preparation Score (BBPS) training video as part of an effort to standardize bowel preparation quality reporting. The BBPS was abstracted from colonoscopy reports. Due to scheduling issues, there was a gradual shift from a high volume to a low volume PEG-ELS preparation in March 2019. Endoscopists were not specifically informed of which preparation was used. Chi-square test was used to determine statistical significance. Data were analyzed using Excel (Version 16.23).

RESULTS: A total of 1,412 colonoscopies were included in our study. Seven hundred and sixty-five (54%) colonoscopies used large volume PEG-ELS, and 647 (46%) used low volume PEG-ELS. Adequate BBPS, defined as a score ≥2 in each colonic segment, was not significantly different between low and high volume preparations (90.1% v. 91.0%; p=0.58). Overall tolerability, defined as a rating of easy or very easy, was higher in low volume preparation (43.6% v. 34.4%; p<0.001). Willingness to take the bowel preparation again was higher in low volume preparation (83.7% v. 76.7%; p<0.001). Overall experience, defined as good or excellent, was also higher in low volume preparation (58.0% v. 51.2%; p=0.009). More subjects in the low volume preparation cohort completed >90% of the preparation (93.3% v. 90.0%; p=0.01).

CONCLUSIONS: In a real-world comparison of low versus high volume bowel preparation as part of a quality improvement project, we found that utilization of low volume preparation was associated with comparable bowel cleaning, as defined by an adequate BBPS. Low volume preparation was also associated with increased tolerability, willingness to take the preparation again, better overall experience and completing >90% of the preparation.
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