

A Comparison of Bowel Preparations for Colonoscopy in Constipated Adults

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PURPOSE

Compare high volume (4L) polyethylene glycol (PEG) preparation (GoLYTELY®) and low volume (2L) PEG preparation with ascorbate (MoviPrep®) to determine which provides the best results in chronically constipated adults.

BACKGROUND

- The quality and safety of colonoscopy depends on the quality of bowel preparation.
- Poor bowel preparation leads to decreased adenoma detection rates and incomplete procedures.
- Constipation affects an estimated 42 million people in the USA.
- Studies show that constipated patients are more likely to have poor preparation. Experts believe a more aggressive preparation regimen is needed.
- Expert opinion is that high volume PEG preparations are sufficient and more effective than low volume PEG preparations for constipated patients. No research exists to support this opinion.

HYPOTHESIS

In constipated adult patients, there will be no statistically significant difference in quality of bowel preparation between high volume PEG (GoLYTELY®) and low volume PEG (MoviPrep®).

METHODS

- IRB approval was obtained.
- Prospective data was collected on 436 adult patients consecutively scheduled for a colonoscopy in an outpatient endoscopy clinic at a 100 bed community hospital. Seven physicians were practicing at the setting.
- Patients were prescribed either high or low volume PEG preparation in a split-dose regimen.
- The data collection tool was developed by the investigator and staff nurses collected the data.

Data collection included:

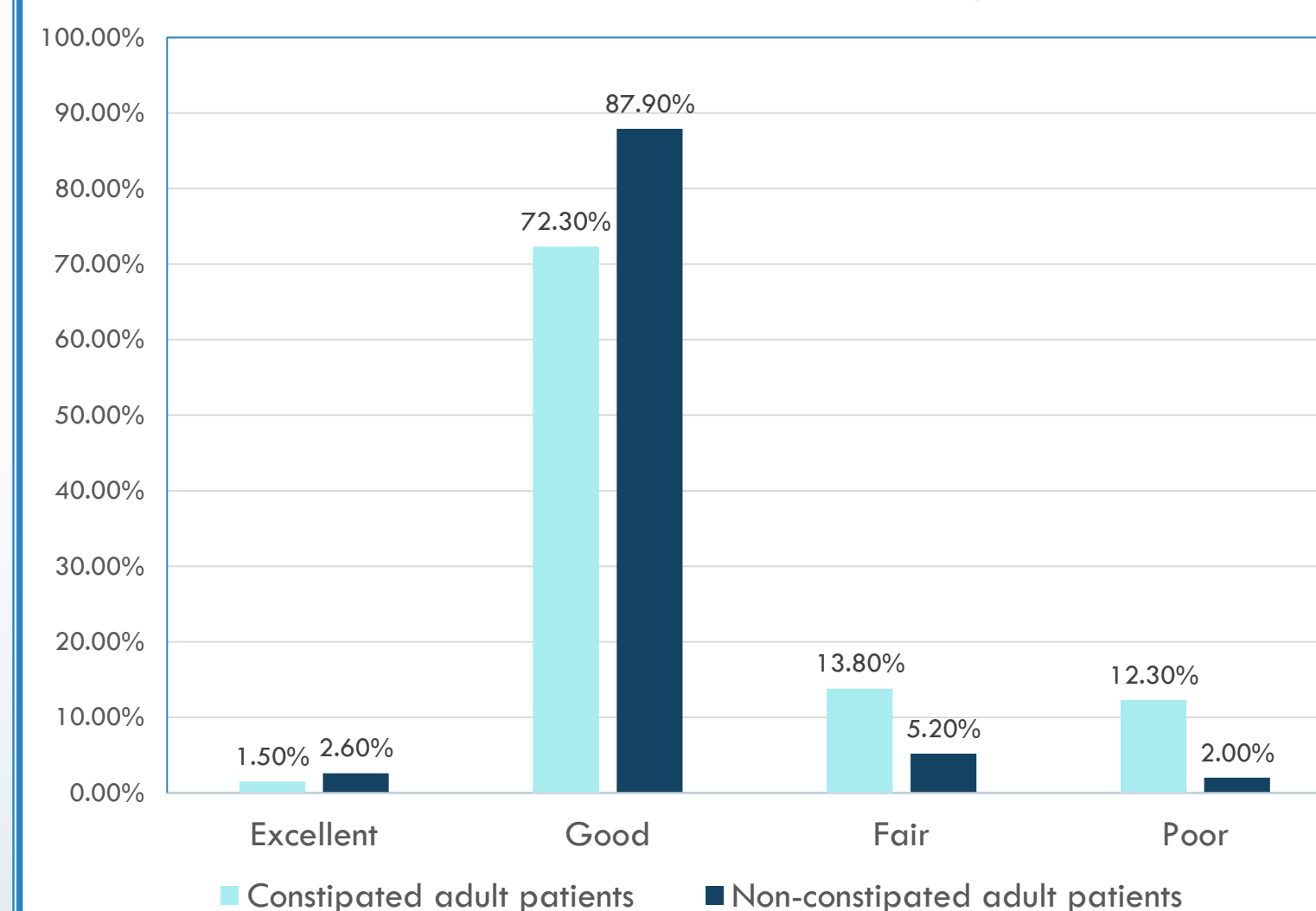
1. Patient's gender
2. Bowel preparation prescribed
3. Compliance with preparation instructions
4. Addition of other medications to preparation regimen
5. Episodes of vomiting while consuming preparation
6. Whether or not patient met criteria for chronic constipation

- Patients were considered constipated if it was recently documented in their history, they self-reported, or met Rome III criteria.
- Quality of the bowel preparation was determined by the physician and rated according to the Aronchick scale; excellent, good, fair or poor.
- Both the Rome III criteria and Aronchick scale are established as valid tools.

RESULTS

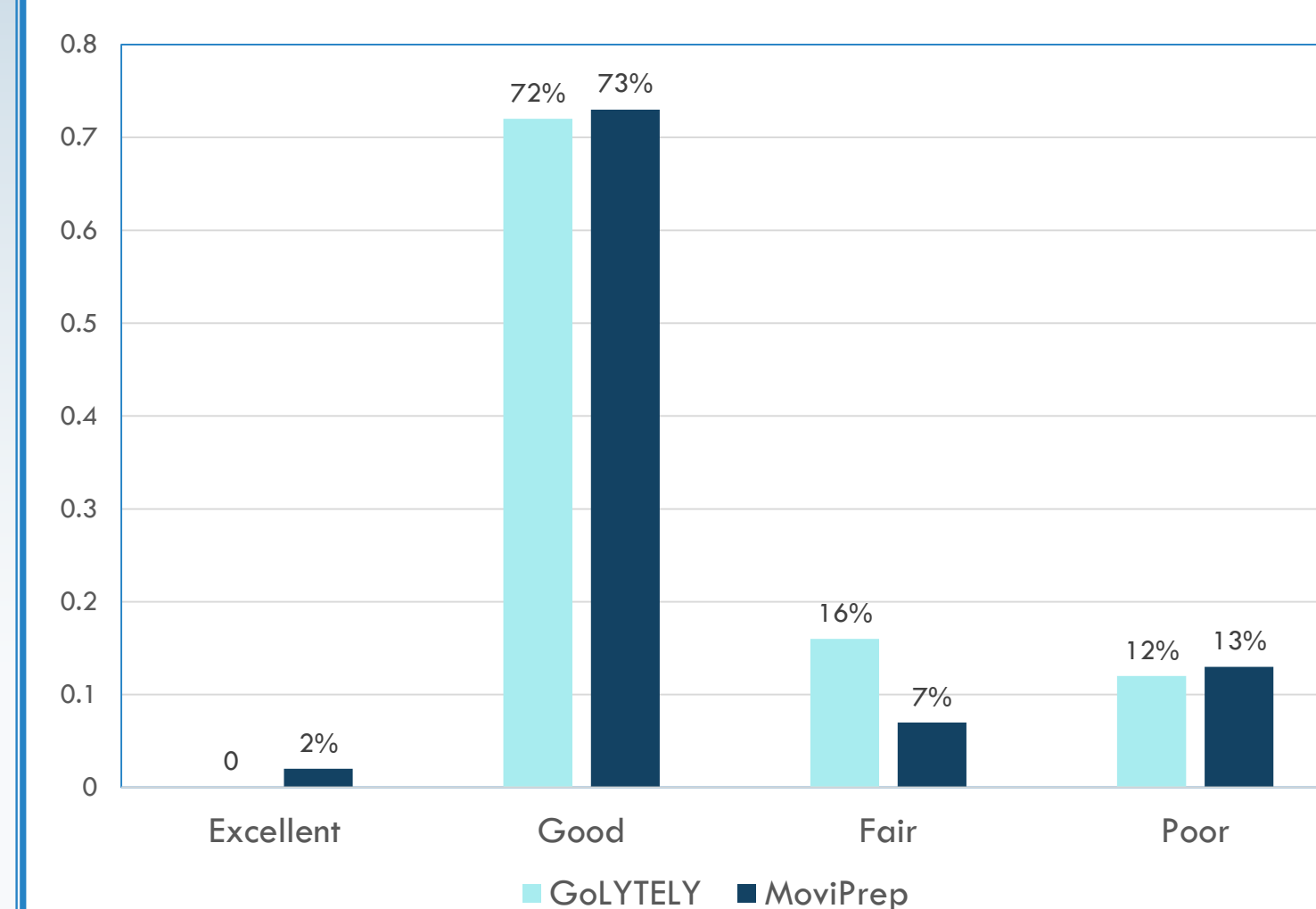
- Of the 436 patients, 372 met inclusion criteria and 64 were excluded.
- Patients were excluded because they did not follow preparation instructions, were prescribed a preparation other than GoLYTELY® or MoviPrep®, vomited the preparation or had incomplete data.
- Of the 372 included patients, 65 (17.5%) were constipated.
- Data was entered into the SSPS v. 19.

Bowel preparation results for all patients included in study



- Regardless of which preparation they were given, 26.1% (n=17) of constipated patients had a fair or poor bowel preparation. This supports existing data of a strong relationship between constipation and poor quality of preparation (p=.00).
- A Chi-square test for independence indicates no significant difference for gender or preparation received.
- A one-way between-group analysis of covariance was conducted to compare results among constipated patients.

Results by preparation for constipated patients



- For constipated patients, there was no statistically significant difference in quality of bowel preparation between GoLYTELY® and MoviPrep® (p=.27) and neither was adequate.

LIMITATIONS

- A convenience sampling method was used; patients were not randomized to receive one of the two preparation regimens.
- Patients were prescribed a preparation based on their physician's preference; physicians were not blinded to the study.
- Reporting of bowel preparation results was subjective and may have varied between providers due to the general inter-observer unreliability of the Aronchick scale.
- A power analysis was not performed *a priori* to determine sample size.

IMPLICATIONS FOR PRACTICE

- Healthcare providers are urged to screen patients for constipation as they schedule for colonoscopy. A more aggressive preparation regimen may then be prescribed.
- At Exeter Hospital, patients with constipation are given one of several more aggressive preparation regimens.

More aggressive regimens:

- Longer interval of clear liquid diet prior to starting preparation
- Additional cathartic
- Bowel preparation dose doubled during a two day period
- Preparations combined

- Healthcare providers are encouraged to participate in studies on the efficacy of longer and more aggressive preparation regimens for chronically constipated adults.

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