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 the 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.

**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=0.00).
- 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.

**LIMITATIONS**

- 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.

**IMPLICATIONS FOR PRACTICE**

- A convenience sampling method was used; random tests were not used 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.

**REFERENCES**