

A PROSPECTIVE STUDY TO ASSESS THE EFFICACY AND PATIENT SATISFACTION OF THREE BOWEL PREPARATIONS FOR COLONOSCOPY

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BACKGROUND

A clean colon is vital for adequate visualization during colonoscopy. The inability of patients to comply with bowel preparation regimens requiring clear liquid diet and the intake of cleansing medications can result in a poorly cleansed colon and suboptimal visualization of the colon. It has been suggested that the use of a prepackaged, low-residue solid and liquid diet/bowel prep kit may serve as a dependable and effective way of preparing the colon by leaving a minimal amount of retained stool while providing complete nutritional balance for patients.

OBJECTIVES

To evaluate the adequacy of bowel cleansing and patient acceptance of Polyethylene Glycol Electrolyte Solution (PEG) or a Magnesium Citrate bowel preparation kit (LoSo Prep™) with a nutritional food kit (NutraPrep®) versus LoSo Prep and clear liquid diet prior to colonoscopy.

METHODS

After obtaining informed consent, patients were randomly assigned to one of three study preparations:

Group 1: Clear Liquid Diet/LoSo Prep

- **Diet:** Clear liquids on the day prior to colonoscopy.
- **Laxation:**
 - Mg citrate (one powdered sachet) given at 5:30 pm the day before the procedure
 - (4) 5 mg oral bisacodyl tablets at 7:30 pm on the day before the procedure.
 - 10 mg bisacodyl suppository administered on the day of procedure at least 1 hour prior to departure.

Group 2: NutraPrep/LoSo Prep

- **Diet:** Prepackaged low residue solid and liquid foods
- **Laxation:**
 - Same as Group 1

Group 3: NutraPrep/PEG

- **Diet:** Prepackaged low-residue solid and liquid foods
- **Laxation:**
 - Polyethylene Glycol Electrolyte Solution (one gallon) starting at 6 pm the day before colonoscopy.

The adequacy of bowel preparation was graded by the one endoscopist (RCR) performing all the procedures. The preparations were rated by patients for tolerance, compliance, side effects and desire for food.

Reference: Rapier RC, Houston C. *Gastroenterology Nursing* 2006; 29(4):305-308.

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DEMOGRAPHICS

Table 1. Demographic Data

	Group 1	Group 2	Group 3
Number of Patients	37	38	39
Gender - Male: Female	22:15	22:16	17:22
Race - Caucasian: Black: Other	31:1:5	32:2:4	35:1:3
Mean Age (years)	61	61	62

RESULTS

Cleansing Efficacy:

The quality of colon cleansing for the three preparations is presented in Figure 1 and Table 2.

Figure 1

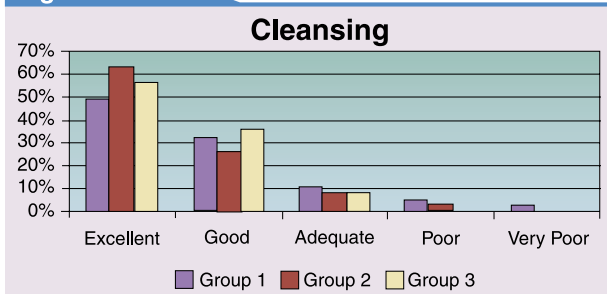


Table 2. Quality of Preparation

	Group1	Group 2	Group 3	p-Value
Preparation Rated Excellent	18 (49%)	24 (63%)	22 (56%)	< 0.0018
Adequate Visualization of the Colon	35 (95%)	38 (100%)	39 (100%)	0.0860
Moderate to Large Amount of Retained Stool	7 (19%)	4 (11%)	3 (8%)	0.0597

Patients in Group 2 had a cleaner colon as compared to Groups 1 and 3, $p=0.0018$. Group 1 patients retained more moderate to large amounts of stool ($p=0.0860$), and adequate visualization was decreased ($p=0.0597$) as compared to Groups 2 and 3; however the results were not statistically significant.

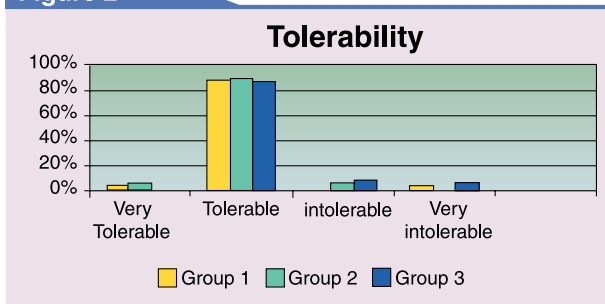
Compliance:

Thirty-six patients (97%) in Group 1 reported excellent compliance with the preparation compared to 38 patients (100%) in Group 2 and 39 patients (100%) in Group 3. However, the difference was not statistically significant ($p=0.2568$).

Tolerance: Figure 2

Thirty-six patients (97%) in Group 1 and 36 patients (95%) in Group 2 rated the preparation to be tolerable to very tolerable compared to 34 patients (87%) in Group 3. The difference was statistically significant ($p<0.0001$).

Figure 2



Meal Kit:

The taste of food in the NutraPrep meal kit was rated by the patients in the study. The overall meal kit was rated as very good, good, bad, or very bad by patients in Groups 2 and 3.

Very Good	6.5%
Good	87%
Bad	5.5%
Very Bad	1%

Side effects:

There were no reported adverse events in any of the study groups.

CONCLUSIONS

Cleansing: LoSo Prep and NutraPrep was statistically better in colon cleansing as compared to PEG and NutraPrep, and LoSo Prep and a clear liquid diet.

Compliance: No statistical difference was seen between clear liquid diet and NutraPrep.

Tolerability: With or without NutraPrep, LoSo Prep was more tolerable statistically than PEG.