

Comparing the Efficacy of Polyethylene Glycol 3350 to Docusate Sodium

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INTRO

- Constipation is problematic for patients in the Neuro Critical Care Unit (NCCU).^{1,2}
- Many medications are used to manage constipation³ including docusate sodium (DS) and polyethylene glycol 3350 (PEG).
- The lack of evidence to support the efficacy of DS^{3,4,5} prompted the University of Utah Hospital (UofUH) NCCU to switch DS in their bowel regimen to PEG in December of 2016.
- We compared the efficacy of these two bowel regimens in maintaining bowel function in the NCCU.

METHODS

- Inclusion Criteria: Neurosurgical service, >age 18, NCCU stay of >24 hours, underwent a neurosurgical procedure.
- Exclusion: use of lactulose not for bowel function.
- N=166 with 83 patients in each group
- Primary outcome: Time to first BM
- Secondary outcomes: Use of PRN rescue therapy, incidence of ileus, frequency of BMs, use of a Fecal Management System (FMS)
- Time to Event Analysis was performed for primary and Logistic/Poisson Regression were performed for secondary outcomes.

RESULTS

- Baseline demographic characteristics were similar between groups.
- No difference in time to first BM
- Use of rescue therapy:
 - DS 72.3%
 - PEG 44.6% p= 0.001
- Placement of FMS
 - DS 18.1%
 - PEG 7.2% p=0.037
- Frequency of BM per day
 - DS 1.04
 - PEG 1.14 p=0.455
- The DS group had a non significant longer length of stay compared to the PEG group.

CONCLUSIONS

- NCC patients receiving PEG compared to DS required less rescue therapy and FMS
- These findings justify the regimen change and show that PEG may be a beneficial alternative to DS in the setting of the NCCU.

Neurosurgical patients taking polyethylene glycol required prn rescue therapy 27.7% less often than patients taking docusate



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Figure 1: Use of Rescue Therapy For Study Groups

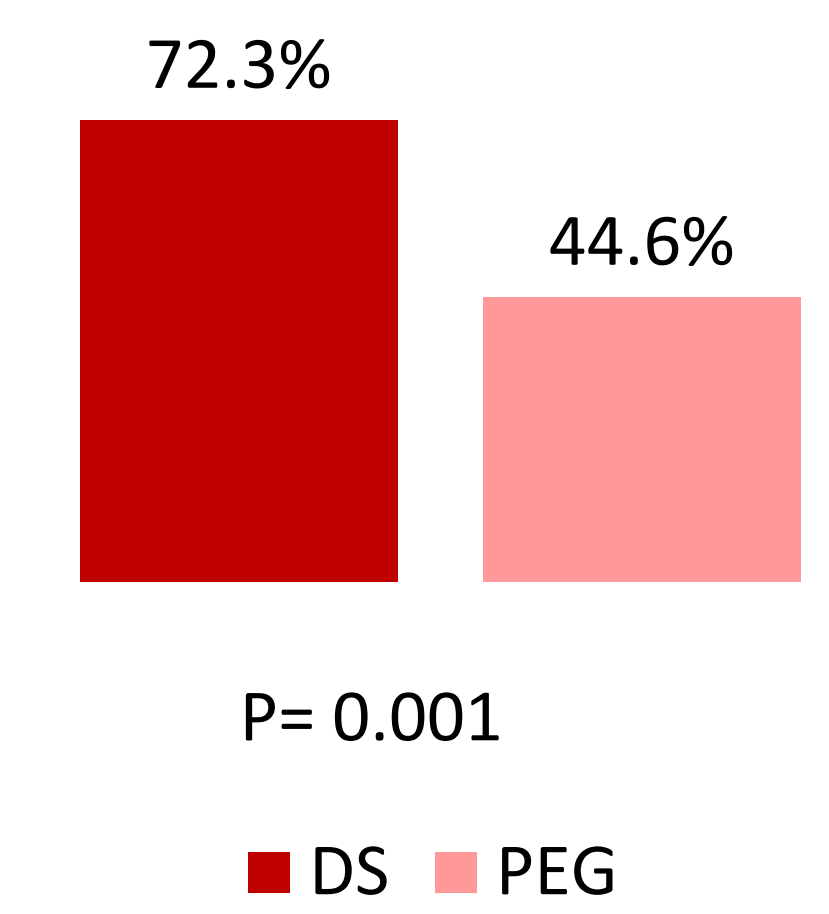
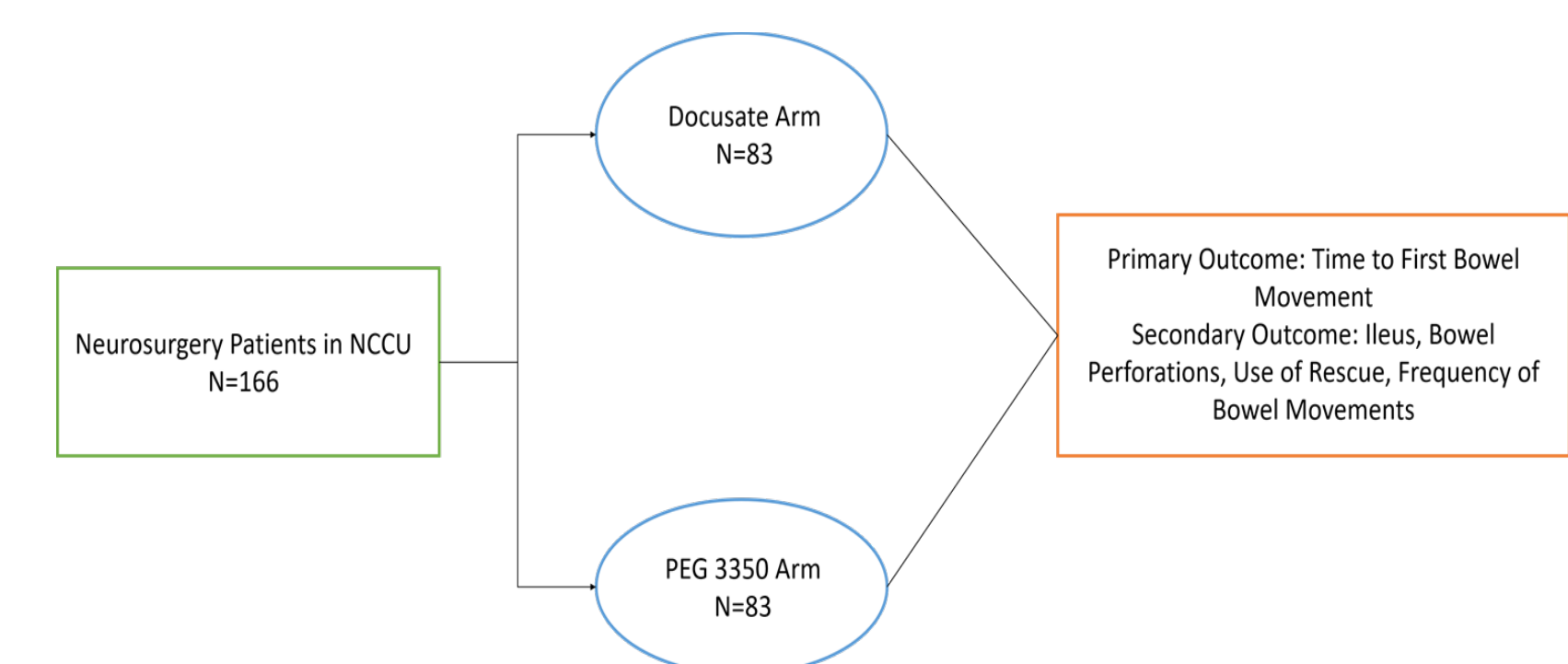


Figure 2: Commonly Used Rescue Therapies

	Overall (N=166)	DS Group (N=83)	PEG Group (N=83)	p-value
Rescue Therapies Used				
Milk of Magnesia	76 (78.4%)	46 (76%)	30 (81.1%)	
Lactulose	24 (24.7%)	24 (40%)	0 (0%)	
Magnesium Citrate	10 (10.3%)	5 (8.3%)	5 (13.5%)	
Naloxegol	31 (32%)	4 (6.7%)	27 (73%)	
Methylnaltrexone	26 (26.8%)	20 (33.3%)	6 (16.2%)	
Fleet Enema	2 (2.1%)	2 (3.3%)	0 (0%)	
SMOG Enema	5 (5.2%)	4 (6.7%)	1 (2.7%)	
PEG	34 (35.1%)	34 (56.7%)		
Number of Bowel Movements per 24 hours, Mean	1.1	1.0	1.1	0.455



DISCLOSURES

- None of the authors have any financial disclosures to disclose.

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