

Pharmacologically Initiated Defecation for Persons With Spinal Cord Injury: Effectiveness of Three Agents

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Objective: To compare the effectiveness of hydrogenated vegetable oil-based bisacodyl (HVB) suppositories, polyethylene glycol-based bisacodyl (PGB) suppositories, and docusate sodium mini-enemas (TVC) in subjects with upper motor neuron spinal cord lesions.

Study Design: Prospective randomized double blind. Fifteen subjects received one of three HVB and 3 PGB suppositories in randomized sequence for each of six scheduled bowel care sessions. Additionally, 10 subjects received 3 TVC. The analysis used time events that divided the bowel sessions into intervals. The analysis also compared digital stimulations, incontinence, and quantity of stool. Wilcoxon rank sum tests and paired *t* tests were used to compare the means of intervals during bowel care initiated by HVB, PGB, and TVC.

Results: (means in minutes and *p* values): *Time to Flatus* - HVB, 32; PGB, 15; TVC, 15; $p < .026$, HVB-PGB; $p < .983$, PGB-TVC; *Flatus to Stool Flow* - HVB, 6.7; PGB 5.5; TVC 3.9 $p < .672$, HVB - PGB; $p < .068$, PGB-TVC; *Defecation Period* - HVB, 36; PGB, 20; TVC, 17; $p < .037$, HVB - PGB; $p < .479$, PGB - TVC; *Wait Until Transfer* - HVB, 10.9; PGB, 10.7; TVC, 7.4; $p < .932$, HVB - PGB; $p < .043$, PGB - TVC; *Total Time for the bowel program* - HVB, 74.5; PGB, 43; TVC, 37; $p < .010$, HVB - PGB; $p < .458$, PGB - TVC; *percent incidence of incontinence between bowel care sessions* - HVB, .067; PGB, .067; TVC, .033; $p < 1.0$, HVB-PGB; $p < .678$, PGB-TVC; *amount of stool produced* - HVB, 3.30; PGB, 3.49; TVC, 3.38; $p < .276$, HVB-PGB; $p < .630$, PGB-TVC; *average number of digital stimulations per bowel care procedure* - HVB, 4.4; PGB, 4.1; TVC, 3.8; $p < .411$, HVB-PGB; $p < .293$, PGB-TVC; *time per digital stimulation in seconds* - HVB 107; PGB, 40; TVC, 83; $p < .149$, HVB-PGB; $p < .352$ PGB-TVC; and the total time, in minutes spent performing digital stimulation during bowel care -HVB, 10.0; PGB, 2.7; TVC, 5.9; $p < .151$, HVB-PGB; $p < .325$, PGB-TVC.

Conclusion: Bowel care took less time when initiated with the PGB bisacodyl or TVC mini-enema as compared with the HVB bisacodyl suppository ($p < .01$)

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