

A comparison of the effectiveness of Therevac SB and bisacodyl suppositories in SCI patients' bowel programs

Primary Investigator

Kathleen Leslie Dunn, MS, RN, CRRN-A, CNS

P.I. Institution Name

Veterans Administration San Diego Healthcare System

Secondary Investigators

Monique Lewis Galka

Objective: To determine if Therevac SB[®] provides a more effective and efficient method of bowel evacuation for persons with spinal cord injury who have delayed evacuation using bisacodyl suppositories.

Design: Quasi-experimental, repeated measures, pilot.

Population, Sample, Setting, Years: Sample (n=14) drawn from the population of spinal cord injured veterans receiving care as inpatients or outpatients at the VA San Diego Healthcare System Spinal Cord Injury Center. Subjects were selected on the basis of reporting prolonged evacuation (> 45 min.) during bowel care using a bisacodyl suppository and willingness to participate in the study. The study was conducted from December 1992-July 1993.

Intervention and Outcome Measures: Interventions consisted of alternating use of bisacodyl suppositories and Therevac SB[®] "mini-enema," a 5 cc rectal instillation of a combination of liquid docusate sodium, glycerin, and polyethylene glycol (medicinal soap). Outcome measures included time to first evacuation, total time needed to complete bowel care, subjective effects interventions, and subject satisfaction and comments.

Methods: Subjects were asked to keep a log of their routine bowel care, including timing with a watch, for the duration of the study. All subjects recorded at least 5 bowel programs (ranging from daily to every 3rd day) as a baseline, using their usual bisacodyl suppository. They then did 5 bowel programs using their usual techniques except to change to Therevac SB[®]. Following this another 5 bowel programs were recorded using the bisacodyl suppository. Subjects also recorded subjective results with the Therevac SB[®] including symptoms of autonomic dysreflexia, cramping, etc., and their overall subjective assessment of which regimen they preferred. Logs were completed by the subjects and turned into the investigators, who discussed the findings with the subjects and clarified any questions or unclear data.

Findings: Using a MANOVA to compare mean evacuation times between the two interventions, a significant difference ($p < .01$) was found between the Therevac SB[®] and bisacodyl suppositories for those subjects who completed the study (n=10). No difference was found between the two courses of bisacodyl suppositories. In addition, for each of these subjects their data was shown in descriptive statistics. Some subjects cut their total bowel evacuation time by one-third to one-half. Four subjects

withdrew, 3 due to unsatisfactory results requiring nursing interventions to correct the problem or complaints of cramping with the Therevac SB[®], and one because he found the record keeping too ponderous. The only female subject was included in this group.

Conclusions: While the sample size for this pilot study was too small to analyze in more depth or with any correlations, this pilot study showed promising trends for the use of Therevac SB[®] in a similar group. In addition to the data presented in the study, the investigators conducted a cost effectiveness evaluation which showed a potential savings in patient time and costs for attendant care, decreased nursing time for inpatients, and improved quality of life. This cost savings significantly off-set the difference in costs between the interventions, even though the Therevac SB[®] was 43 times more expensive than the generic bisacodyl suppositories.

Clinical Implications: There is a serious deficit in any research literature regarding bowel management in the spinal cord injured population. Since this study was published, several more have been completed using similar methodologies, but most practice and literature is based on tradition, trial and error information or case studies. The results of this study can provide guidance for further research with these and other bowel interventions. Bowel care success is a significant factor in quality of life for persons with SCI, and nursing is the main discipline responsible for developing successful programs in collaboration with the patient. The results of this study were used at the investigators' medical center to justify addition of the Therevac SB[®] to the hospital inpatient and outpatient formulary using guidelines developed by the investigators.