

Developmental Pediatrics

Title: SURGICAL VERSUS MEDICAL MANAGEMENT OF BOWEL CONTINENCE FOR CHILDREN WITH SPINA BIFIDA

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Background: Neurogenic bowel is almost universal for children with spinal dysraphism, causing significant medical and social morbidity. Studies have evaluated surgical procedures for creation of a conduit for antegrade enema instillation (ACE), but none report large-scale comparisons of surgical versus medical management. This study's goal is to compare rates of bowel continence among treatment modalities.

Method: A multi-center, retrospective chart review was conducted of 210 patients ages 5 to 12 years as part of a larger project funded as an AUCD (RTOI) grant. Information collected included demographic variables, rates of continence, and treatment modalities. Quality of life (QOL) of the child was assessed prospectively on a subset of the patients, using the child and parent report versions of the PedsQL (Varni, 1999).

Results: Demographic data revealed 50.2% female subjects; 32.5% subjects were ambulatory without aids. 41.5% report bowel continence. 38.5% reported bowel programs with oral medications. 13.8% reported surgical interventions (ACE or cecostomy). Two hundred subjects had complete data for *surgical* intervention and bowel continence. Of these, 28 (14%) received surgery; and of these, 21 were continent (75%). Of 198 subjects with complete data for *medical* treatment and continence, 72 (36%) were treated with medicines; and of these, 18 (25.0%) were continent. Surgical treatment was related to functional continence (chi square test, $p < .0005$). Medical treatment was related to lower prevalence of continence ($p < .005$). Children with bowel continence are reported as having higher QOL, as reported by child ($p < .07$) and parent ($p < .04$).

Conclusion: These results reveal that surgical interventions for bowel continence in spina bifida are strongly correlated with bowel continence. Bowel continence is associated with better QOL.