

TO REVIEW THE LONG-TERM RESULTS OF MALONE ANTEGRADE CONTINENCE ENEMA (MACE) PROCEDURE IN CHINESE PAEDIATRIC PATIENTS WITH NEUROGENIC BOWEL DYSFUNCTION ASSOCIATED WITH SPINAL DYSRAPHISM

Hypothesis / aims of study

To review the long-term results of Malone Antegrade Continence Enema (MACE) procedure in Chinese paediatric patients with neurogenic bowel dysfunction associated with spinal dysraphism.

Study design, materials and methods

4 patients - 3 girls and 1 boy, aged 8-12 (mean 9.5) years - underwent Malone Antegrade Continence Enema procedure between Feb - Sep 2006. Diagnoses are spinal dysraphism in all 4 patients. Mean follow-up was 69.25 (range 66-73) months. Indications for surgery were chronic intractable constipation (4) and fecal incontinence (3) despite intensive bowel management with dietary measures, laxatives, suppositories, enemas or retrograde colonic irrigation. 2 patients had concomitant augmentation entero-cystoplasty for neurogenic bladder. All were followed up regularly with assessment of: frequency of performing antegrade continence enema, type and volume of fluid used, duration required, as well as fecal continence status.

Results

All 4 patients performed the antegrade continence enema independently everyday. Lukewarm tap water was utilized for enema in all cases without laxatives or purgatives. Mean frequency of enema was every one and half (range 1-2) days. Mean volume of tap water required was 875 (range 600 - 1200) ml. The time required for finishing the procedure and bowel movement ranged from 15 to 60 (mean 45) minutes. Mean time duration to develop a regular bowel movement pattern was 6.75 (range 6 - 9) months. All experienced no fecal incontinence from stoma or rectum. All four patients enjoyed no constipation. Serum sodium level of all patients was within normal range. One of four patients reported stomal stenosis requiring self dilation daily since 36 months after the MACE procedure.

Interpretation of results

The Malone Antegrade Continence Enema (MACE) procedure in Chinese paediatric patients with neurogenic bowel dysfunction rendered our cohort of patients free from constipation and fecal incontinence. The enema time and bowel movement time were reasonable. It is safe to use tap water for antegrade continence enema in Chinese paediatric patients with neurogenic bowel dysfunction associated with spinal dysraphism.

Concluding message

Chinese paediatric patients with neurogenic bowel dysfunction associated with spinal dysraphism could benefit from Malone Antegrade Continence Enema procedure, which can free patients from constipation and fecal continence. It allows independency, and induces improvement on quality of life; social and psychological well-being. However, further longer follow up is required to assess the long term efficacy and durability of the Malone enema channel.

Disclosures

Funding: nil **Clinical Trial:** No **Subjects:** HUMAN **Ethics not Req'd:** retrospective study **Helsinki:** Yes **Informed Consent:** Yes