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## WINNING THE "TRIFECTA" IN NEUROGENIC BLADDER DUE TO MYELODYSPLASIA: UPPER URINARY TRACT, LOWER URINARY TRACT AND GASTROINTESTINAL SYSTEM

### Hypothesis / aims of study

Almost all children with myelodysplasia have some degree of urinary tract deterioration and bowel dysfunction. The trifecta of urological care in children with myelodysplasia is to prevent urinary tract deterioration, achieve urinary continence and attain normal or socially adapted bowel function. Present study investigates the predictive neurolouological factors with respect to "Winning the 'Trifecta'".

### Study design, materials and methods

Patients with myelodysplasia who received a primary repair before age 3 and started uro-neurological follow-up in afterwards were evaluated in the present study. The charts of two hundred children were reviewed, retrospectively. Patients were grouped according to their status in terms of upper urinary tract deterioration, urinary incontinence, and bowel dysfunction. All patients underwent physical examination, urine analysis, kidney function tests, ultrasonography (USG), voiding cysto-urethrography, urodynamic studies and dimercaptosuccinic acid (DMSA) scintigraphy in case of necessity (with high-grade VUR, evidence of renal scarring or renal size discrepancy on USG). The trifecta of urological care in children with myelodysplasia is defined as achieving a protected upper urinary tract, urinary continence between clean intermittent catheterization (CIC) intervals for those who are on CIC, and normal bowel function.

### Results

Overall 200 patients were involved in this retrospective study. Of all patients, 31 patients achieved trifecta and 169 patients did not have trifecta.

### Interpretation of results

The mean age of the patients with trifecta and no-trifecta was found to be  $5.45 \pm 4.15$  and  $4.84 \pm 3.11$  years, respectively. Mean detrusor leak point pressure (DLPP) of the patients prior to follow-up was found to be  $54.74 \pm 36.39$  cmH<sub>2</sub>O and  $56.83 \pm 35.82$  cmH<sub>2</sub>O, respectively. At the end of the 9-month follow-up period, the mean DLPP was found to be  $31.19 \pm 19.32$  cmH<sub>2</sub>O and  $40.31 \pm 29.94$  cmH<sub>2</sub>O, respectively. Each patient seemed to have a decrease in DLPP, with an average decrease of  $23.55 \pm 34.94$  cmH<sub>2</sub>O and  $16.52 \pm 36.37$  cmH<sub>2</sub>O, respectively. Patients without motor deficiencies (85 vs. 5), patients on prophylaxis (140 vs. 19), patients with a decrease in the grade of hydro and reflux degree (27 vs. 0 and 46 vs. 0), and patients who have undergone secondary untethering operations (31 vs. 2) usually have a trifecta event ( $p < 0.05$ ).

### Concluding message

"Winning the trifecta" of urological care in children with myelodysplasia is difficult. The only predictive parameters to win trifecta are absence of motor deficiency, antimicrobial prophylaxis and a decrease in the grade of hydronephrosis and reflux. A secondary untethering operation is associated with less trifecta event. Interestingly, a decrease of DLPP is not always associated with trifecta.

### Disclosures

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