

## EFFICACY OF CLEAN INTERMITTENT CATHETERIZATION FOR URINARY INCONTINENCE IN PATIENTS WITH NEUROGENIC LOWER URINARY TRACT DYSFUNCTION SECONDARY TO MYELODYSPLASIA

### Hypothesis / aims of study

After introduction of clean intermittent catheterization (CIC) for the management option of neurogenic lower urinary tract dysfunction (NLUTD) in myelodysplastic patients, the incidence of upper urinary tract deterioration and renal insufficiency was markedly decreased, and the prognosis of myelodysplastic patients has been improved. However, urinary incontinence in such patients is an important issue because urinary incontinence reduces quality of life and its effect becomes more significant as patients age.

In the present study, we assessed the efficacy of CIC on controlling urinary incontinence in patients with NLUTD secondary to myelodysplasia

### Study design, materials and methods

The cohort comprised 27 patients (11 male and 16 female, aged between 5 year to 26 years) with NLUTD secondary to myelodysplasia. The patients were stratified into the two groups. The Group A included 11 patients who had dilated upper urinary tract or vesicoureteral reflux (VUR) when CIC was introduced. The remaining 16 patients with normal upper urinary tract were enrolled to the Group B. Patient's age at CIC introduction ranged between 6 months to 7 years (2.2±2.2 years) All patients had moderate to severe urinary incontinence before introduction of CIC. In the present study, we defined socially acceptable continence as having completely dry condition or slight stress urinary incontinence that patients manage with several small pads. Continence status were evaluated when patients were 5 years old in those who started CIC before 4 years old and at 1 year later in those who started CIC after 4 years old.

### Results

Of the 11 group A patients, five (45%) obtained socially acceptable continence with CIC and administration of anti-cholinergics. In the remaining six patients, five patients underwent enterocystoplasty for upper urinary tract deterioration and/or febrile urinary tract infection that were refractory to conservative treatment. Although they had moderate to severe urinary incontinence after CIC introduction, their urinary incontinence was markedly improved to socially acceptable continence by surgery. Of the 16 group B patients, four (25%) reported socially acceptable continence with CIC alone, and six (38%) became acceptable status with CIC and anti-cholinergics.

### Interpretation of results

Urinary incontinence in patients with myelodysplasia is thought to be a compound condition of stress incontinence, overflow incontinence and reflex incontinence due to detrusor overactivity. Urethral sphincter deficiency and/or bladder storage dysfunction including low compliance bladder and detrusor overactivity are common pathophysiology of urinary incontinence in myelodysplastic patients. In our series, it was only 15 patients (56%), who had socially acceptable continence after initiation of CIC and anti-cholinergics.

### Concluding message

The present study suggests that there is a limitation of conservative treatment to achieve socially acceptable continence in patients with NLUTD due to myelodysplasia.

### Disclosures

**Funding:** None **Clinical Trial:** No **Subjects:** HUMAN **Ethics not Req'd:** we retrospectively reviewed the records of 27 patients with neurogenic lower urinary tract dysfunction secondary to myelodysplasia to evaluate the efficacy of clean intermittent catheterization for urinary incontinence. **Helsinki:** Yes **Informed Consent:** Yes