

Abstract

The pilot study: Lower urinary tract dysfunction and treatment outcomes of standard urotherapy in children with primary vesicoureteral reflux

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Background: Lower urinary tract dysfunction (LUTD) is common in children and related to urinary tract infection (UTI). LUTD is also found in children with primary vesicoureteral reflux (VUR) and increases the risk of breakthrough UTI. Standard urotherapy may improve the LUTD and decrease the rate of UTI.

Objectives: To study the prevalence of LUTD in children with primary VUR and evaluate the treatment outcomes of standard urotherapy.

Methods: Prospective pre and post study in children with primary VUR. LUTD was evaluated by Thai version Dysfunctional Voiding Symptom Score (DVSS). Standard urotherapy was given if DVSS ≥ 6 in girl and ≥ 9 in boy. Strengths and difficulties questionnaire (SDQ), uroflowmetry and ultrasound for postvoid residual were also performed. Patients were follow up at 3 and 6 months later.

Results: 22 children with primary VUR were recruited, with mean age of 5.4 ± 1.6 years. 5 patients (22.7%) had LUTD. Children with or without LUTD had no difference in age, laterality of VUR, number of patients receiving antibiotic prophylaxis, and renal scarring. Mean DVSS of children with and without LUTD were 13.4 ± 2.2 and 2.7 ± 2.2 ($p < 0.001$). Three months after standard urotherapy in LUTD group, DVSS was decreased to 7.5 ± 3.4 ($p=0.11$). Difficult elimination symptoms was the common problem in both groups. Hyperactive and inattention was found in 3 of 5 children with LUTD.

Conclusion: LUTD was prevalent in children with primary VUR. Standard urotherapy might decrease DVSS, but larger and longer study is needed.

Keyword: Standard urotherapy, lower urinary tract dysfunction, dysfunctional voiding symptom score, primary vesicoureteral reflux

