

High prevalence of lower urinary tract dysfunction in patients with Prader–Willi syndrome

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Abstract

Aims

To report the first noninvasive urodynamic screening of lower urinary tract dysfunction (LUTD) in children, adolescents, and young adults with Prader–Willi Syndrome (PWS).

Methods

We recruited 37 PWS patients with/without lower urinary tract symptoms (LUTS) from our hospital. Uroflowmetry was performed in 36 patients. In addition, 20 patients underwent postvoid residual urine (PVR) measurement by transabdominal ultrasound. LUTD is defined as abnormal uroflow patterns, low peak flow rate (Q_{max}), or elevated PVR by age. Videourodynamic study (VUDS) was performed in selected cases.

Results

Mean and median age of the patients were 17.7 ± 7.8 years and 16 years. Male to female ratio was 15/22. Two patients were excluded from the following analysis because of voided volume less than or equal to 50 ml. Of the remaining 34 uroflowmetry examination, normal voiding pattern (bell shape) was observed in 22 (64.7%) patients. Abnormal uroflowmetry pattern were obstructive in 6 (17.6%), staccato in 3 (8.8%), intermittent in 2 (5.8%), tower in 1 (2.9%), and plateau in 0 patients. Ten (29.4%) patients had a Q_{max} less than 15 ml/s. Of 20 patients undergoing PVR tests 10 (50%) had elevated PVR by age (> 6% of estimated bladder volume). In all, 17/34 (50.0%) PWS patients had at least one abnormality of the noninvasive tests. Of the three cases undergoing VUDS all showed detrusor sphincter dyssynergia.

Conclusions

Half of PWS patients with/without LUTS had LUTD. Noninvasive study such as uroflowmetry and postvoid residual urine by ultrasound is recommended to all patients with PWS.