Correspondence

Urodynamic study is the ultimate weapon for diagnosing lower urinary tract dysfunction

When we searched MEDLINE, it was easy to find numerous published papers on urodynamic findings in various neurological diseases such as diabetes, stroke, Parkinson’s disease (PD), spinal cord injury, and multiple sclerosis. However, I often wonder how these urodynamic data can be applied to individuals in clinical practice. In a study of urodynamics in 50 untreated patients with PD, Uchiyama et al. found detrusor overactivity in 58%, an increased bladder sensation in 12%, detrusor underactivity in 50%, impaired urethral relaxation in 8%, and bladder outlet obstruction in 16%. In addition, as shown in that article, three PD patients had different urodynamic findings. The diversity of urodynamic findings makes urologists and even urodynamic specialists feel that it is difficult to speculate on a urodynamic-specific diagnosis in a PD patient if a urodynamic study is not performed.

Elderly patients often have several medical problems. Failure to differentiate between lower urinary tract dysfunction (LUTD) and benign prostatic hyperplasia in studies of men with neurological diseases might contribute to the confusion about their pathophysiological associations. For example, a 67-year-old male parkinsonism patient was bothered with frequency and urge incontinence for 2 years. His prostate size was 52 mL, and a urodynamic study revealed detrusor overactivity (DO) and bladder outlet obstruction (BOO). It was difficult to understand if the cause of his DO was benign prostatic obstruction, neurodegeneration from PD, or both, because too many confounding factors existed. Furthermore, if PD is the main cause of the LUTD, to our knowledge, data are scarce whether medication for PD can improve a patient’s LUTD.

So, can we draw a tentative conclusion that every patient with PD should receive an invasive and time-consuming urodynamic study to achieve an accurate diagnosis before treatment? Although it may be true theoretically, this is not practical in the real world. Recently, Liao et al. showed that calculation of the International Prostate Symptom Score (IPSS) subscores and the voiding-to-storage subscore ratio (IPSS-V/S) is a simple and useful method to differentiate between failure to void and failure to store LUTD in men with lower urinary tract symptoms. Homma et al. also found that the Overactive Bladder Symptom Score is highly sensitive to treatment-related changes in overactive bladder symptoms and can be an easy and simple tool to use in daily clinical practice. Other noninvasive tools such as uroflowmetry, postvoiding residuals, near-infrared spectroscopy, the prostate urethral angle, detrusor wall thickness, and intravesical prostatic protrusion have been considered novel methods to diagnose BOO. In clinical practice for treating parkinsonian patients, we can use these simple, available tools as guides for initial treatment. However, if satisfactory therapeutic outcomes cannot be achieved or patients need invasive treatment, a urodynamic study and/or videourodynamic study will be necessary for further evaluation. So far, none of the above methods described in recent studies can fully replace a urodynamic investigation. Urodynamics is still the ultimate weapon in diagnosing LUTD.

References


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