616

Shibata C[1], Fuse M[1], Kaga K[1], Awa Y[2], Uchiyama T[1], Oikawa S[3], Kamai T[4], Hishinuma A[5], Sakakibara R[6], Yamanishi T[1]

1. *Continence Center / Dokkyo Medical University Hospital,* ***2.*** *Department of Urology, Graduate School of Medicine, Chiba University,* ***3.*** *Laboratory center, Dokkyo Medical University,* ***4.*** *Department of Urology , Dokkyo Medical University,* ***5.*** *Department of Clinical Laboratory, Dokkyo Medical University,* ***6.*** *Neurology, Internal Medicine, Sakura Medical Center, Toho University*

THE URODYNAMIC CHARACTERISTICS OF MID URETHRAL OBSTRUCTION IN WOMEN

Hypothesis / aims of study

Mid urethral obstruction (MUO) during voiding cystourethrography (VCUG) may be noted in some patients with voiding difficulty as well as urinary frequency/urgency and/or urinary incontinence. The nature of MUO has been reported to be detrusor-sphincter dyssynergia or dysfunctional voiding. However, the details of lower urinary tract symptoms (LUTS) and urodynamic evaluation including external-sphincter electromyography (EMG) in MUO have not been thoroughly evaluated. The aim of the present study is to investigate LUTS and lower urinary tract function in women with MUO determined by pressure/flow study on videourodynamics.

Study design, materials and methods

We identified 14 female patients with MUO by videourodynamics from May 2013 to March 2014 retrospectively: mean age 62.3 years old (41- 84). We evaluated LUTS or autonomic nervous system disease by overactive bladder symptom score (OABSS) questionnaire and videourodynamics including surface electromyography (EMG) at perianal region.

Results

Nine patients (60%) had increased day time urinary frequency , and 3 patients (20%) had urinary retention as a chief complaint. Two patients did not have LUTS. The number of daytime void was 11.8±2.5 times and the night time frequency was 1.6±0.70 times. The mean urinary urgency frequency was 3.9±1.7 times per day. Eleven patients had detrusor overactivity. PdetQmax was 39.1±27.9 cmH2O. Qmax was 19.9±10.3 ml/sec. At the terminal urinary flow curve, it was seen that there was a prolonged flow time with decreased flow rate. The post-void residual urine (PVR) volume was 8.9±19.4ml, and PVR was 0ml in 10 patients. Obvious detrusor external sphincter dyssynergia (DSD) was not found in external-sphincter EMG. According to Blaivas-Groutz nomogram, mild obstruction was noted in 6 patients, moderate obstruction in 5 patients, severe obstruction in 1 patient, and unobstruction in 1 patient.

Interpretation of results

In this study, detrusor external sphincter dyssynergia (DSD) was not found in women with MUO. The pressure/flow pattern in patients with MUO seemed to be high detrusor pressure and high flow rate. It was seen that the terminal urinary flow curve tend to have prolonged flow time with decreased flow rate.

The patients with MUO tend to have severe urgency rather than daytime urinary frequency. The characteristics of LUTS of MUO may be the one of factor that lead to urgency and might be related to retention in female.

Women with MUO seemed to be not typical dysfunctional voiding because of small PVR and normal external sphincter activity based on EMG.

Concluding message

MUO is uncommon but noteworthy clinical finding to evaluate in females with LUTS.

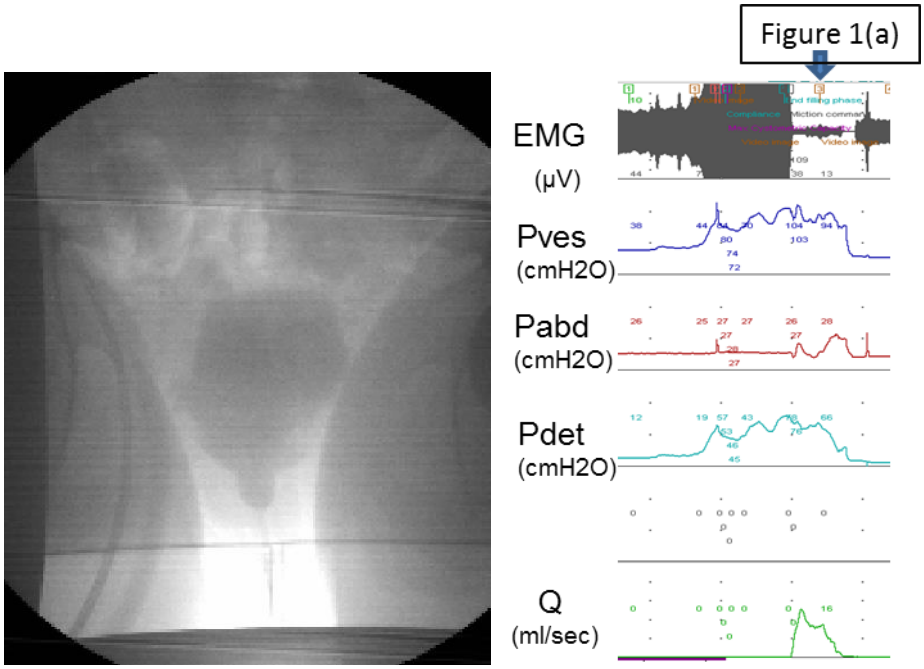

Figure1 (a) Voiding cystourethrography on videourodynamics (b) Urodynamics in a case of female mid urethral obstruction.

References

1. Dudley Robinson, David Staskin, Rosa M. Laterza, and Heinz Koelbl. Difining female voiding dysfunction: ICI-RS 2011. Neurourol Urodyn. 31:313-316:2012
2. Asnat Grouts, Jerry G. Blaivas, and David C. Chaikin. Bladder outlet obstruction in women: definition and characteristics. Neurourol Urodyn. 19:213-220:2000
3. Victor W. Nitti, Le Mai Tu and Jordan Gitlin. Diagnosing bladder outlet obstruction in women. j Urol. 161:1535-40:1999

Disclosures

Funding: No **Clinical Trial:** Yes **Public Registry:** No **RCT:** No **Subjects:** HUMAN **Ethics Committee:** Ethics Committee of Dokkyo Medical University **Helsinki:** Yes **Informed Consent:** Yes