

LOCATION OF THE DESIRE TO VOID AND URINARY URGENCY IN MALE PATIENTS WITH LOWER URINARY TRACT SYMPTOMS

Hypothesis / aims of study

In patients with overactive bladder syndrome (OAB), it is said that urgency is usually described as being felt lower down than the sensations of bladder filling and the normal desire to void. However, only two articles have recently described the location of recalled sensation and that of induced sensation during filling cystometry in female OAB patients [1, 2]. There has been little information about the location of the desire to void or that of urinary urgency in male OAB patients as well as about the association between them and the severity of OAB symptoms or that of lower urinary tract symptoms (LUTS). The aim of this study was to determine the locations of the desire to void and urinary urgency in male LUTS patients, and correlate them with the severity of OAB and LUTS.

Study design, materials and methods

Twenty-three consecutive male patients with LUTS older than 50 years old who visited our out-patient clinic and 10 male asymptomatic controls were enrolled. The LUTS patients were excluded if they had urinary tract infection, bladder stone, neurogenic bladder and the malignant tumor of the bladder or prostate. The LUTS patients and controls were asked to describe the location of their strong desire to void (SDV), and also that of urgency if they were experiencing urgency. If they were unable to indicate a location, they were instructed to identify the location where they felt SDV and/or urgency and were asked again about the location 1 to 2 weeks later. The LUTS of the patients were assessed using the International Prostate Symptom Score (I-PSS), the Overactive Bladder Symptom Score (OABSS) [3] and the I-PSS QOL score, and their prostate volumes were estimated with transabdominal ultrasound. Information about their co-morbidity was obtained from their medical records.

Results

The mean age of the male LUTS patients was 75 ± 2 (mean \pm SEM) years, and that of the controls was 37 ± 2 . All 10 controls felt SDV in the suprapubic region, whereas among the LUTS patients, their SDV was localized at sites other than the suprapubic region, i.e., the penile region or perineum in 3 (33%) of the 9 LUTS patients without urgency and in 7 (50%) of the 14 LUTS patients with urgency (OAB patients) ($p=0.09$ and 0.02 for each compared to the control, respectively). Ten (71%) of the 14 OAB patients stated that they experienced urgency at sites other than the suprapubic region; one (25%) of the four patients who experienced urgency less than once a week and nine (90%) of the ten patients who experienced urgency once a week or more experienced urgency in the penile region or the perineum. The mean value of the urgency core (the third question in the OABSS questionnaire: How often do you have a sudden desire to urinate, which is difficult to defer?) was significantly higher in patients whose urgency was felt at sites other than the suprapubic region than in those whose urgency was felt at the suprapubic region (2.50 ± 0.31 vs. 1.25 ± 0.25 , $p=0.03$). However, the OABSS total score was not different between the OAB patients whose urgency was located at the penile region or perineum and those whose urgency was located at the suprapubic region (5.90 ± 0.59 vs. 4.50 ± 0.65 , $p=0.24$). The location of SDV or urgency was not associated with the total I-PSS score, the I-PSS QOL score, ultrasound-estimated prostate volume, age, or the presence of hypertension or diabetes mellitus in the LUTS patients.

Interpretation of results

In 50% of the male OAB patients, SDV was located at the penile region or perineum. Even in the male LUTS patients without OAB, the 30% of them felt their SDV in the penile region or perineum, suggesting that the shift of the location of SDV from the suprapubic region to the penile region or perineum may precede the development of OAB in male LUTS patients. Urgency was more frequently experienced at sites other than the suprapubic region, as was an increase in the frequency of urgency. Therefore, the location of urgency may be associated with the severity of urgency. However, there was a lack of the association between the location of urgency and the overall severity of OAB assessed by the OABSS, suggesting that the location of urgency may not contribute to the assessment of OAB. Considering the origin of urgency in the male OAB patients, our finding that urgency was likely to be experienced in the penile region or perineum implies that a possible increase in sensory input from the prostatic urethra or urethral sphincter during the filling phase is associated with urgency.

Concluding message

The shift of the location of SDV from the suprapubic region to the penile region or perineum may precede the development of OAB in male LUTS patients. In male OAB patients, the location of urgency may be associated with the severity of urgency.

References

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2. Digesu GA, Basra R, Khullar V et al. *Neurourol Urodyn* 2009; 28: 191.
3. Homma Y, Yoshida M, Seki N et al. *Urology* 2006; 68: 318.

Disclosures

Funding: none **Clinical Trial:** No **Subjects:** HUMAN **Ethics Committee:** The ethical committee of the Hayashi Hospital **Helsinki:** Yes **Informed Consent:** Yes