

## CHARACTERISTICS OF URINARY RETENTION IN FEMALE INPATIENTS MANAGED WITH MEDICAL TREATMENT

### Hypothesis / aims of study

Urinary retention is a severe impairment of voiding, which can be defined as inability to achieve complete bladder emptying by voluntary micturition. Urinary retention is common in elderly men but is unusual in women. Even if it is relatively common to see urinary retention after surgery such as lower urinary tract, perineal, gynaecologic and anorectal surgery, urinary retention may be occurred occasionally in female managed with non-surgical treatment. So, we analyzed the characteristics of urinary retention in female inpatients managed with medical treatment.

### Study design, materials and methods

We retrospectively analyzed the medical records of female inpatients managed with medical treatment that were referred to the department of urology because of urinary retention at our institution from January 2008 to December 2012. Urinary retention is defined as palpable bladder when the patient is unable to pass any urine or large post void residual with ultrasonography. The data obtained included age, body mass index, ambulatory state, medical and surgical history, classes of taking drugs or injections and urinary tract infection.

### Results

A total of 332 female patients (surgical treatment: 180, medical treatment: 152) were referred to the department of urology because of urinary retention and 152 female patients with medical treatment were reviewed. The median age of patients was 76.00 years (range: 25-97) and mean body mass index was  $22.94 \pm 3.11 \text{ kg/m}^2$ . The females with ambulatory disturbance were 43 (28.3%). 25 of 43 (58.1%) with ambulatory disturbance had neurologic disturbance such as paraplegia or hemiplegia. The females with comorbid medical history were 138 (90.8%): cardiovascular disorders 106 (69.7%); diabetes mellitus 76 (50.0%); pulmonary disorders 25 (16.4%); psychogenic disorder 24 (15.8%); chronic renal disorders 22 (14.5%); stroke 16 (10.5%); liver disorders 10 (6.6%); metastatic malignancy 10 (6.6%). In addition, females with multiple disorders were 99 (65.1%): two 55 (36.2%); three 35 (23.0%); four 9 (5.9%). The females with surgical histories were 33 (21.7%): anti-incontinence surgeries 11 (7.2%); gynecologic surgeries 9 (5.9%); spinal surgeries 8 (5.3); brain surgeries 6 (3.9%); anorectal surgeries 4 (2.6%). In classes of taking drugs or injection, the females taking nonsteroidal antiinflammatory drugs were 82 (53.9%), antidepressants/antipsychotics 56 (36.8%), decongestants 40 (26.3%), diuretics 38 (25.0%), antispasmodics/muscle relaxants 19 (12.5%), antihistamines 15 (9.9%), antimotility/antidiarrheal agents 14 (9.2%), narcotics 10 (6.6%), antiemetics 8 (5.3%), anticholinergics 4 (2.6%), dopaminergic agents 3 (2.0%). Especially, the females taking multiple drugs or injections with known antimuscarinic effects except nonsteroidal anti-inflammatory drug, narcotics and diuretics were 40 (26.3%): two 27 (17.8%); three 13 (8.6%). The females with urinary tract infection were 36 (23.7%). Lastly, 2 females had history of pelvic bone fracture.

### Interpretation of results

Compared to postoperative urinary retention in female, urinary retention in females managed with medical treatment could be occurred occasionally. Patients had almost comorbid medical history and about one-third of patients had also multiple disorders. In addition, about a quarter of patients were taking multiple drugs or injections with antimuscarinic effects.

### Concluding message

There are various causes in female urinary retention, so a detailed history is crucial, especially about comorbid medical history and taking drugs or injections.

### References

1. Oelke M et al. Diagnosis and medical treatment of lower urinary tract symptoms in adult men: applying specialist guidelines in clinical practice. BJU Int. 2012;110:710-718
2. Garcia-Fadrique G et al. causes, characteristics and mid-term course of acute urinary retention in women referred to a urodynamics unit. Actas Urol Esp. 2011;35:389-393
3. Sohler Elneil. Urinary retention in women and sacral neuromodulation. Int Urogynecol J. 2010;suppl 2:S475-483

### Disclosures

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