

## PREVALENCE OF URINARY DISTURBANCES AND ITS RISK FACTOR IN A DAY SERVICE CENTER IN THE ELDERLY

### Hypothesis / aims of study

Urological disturbances are common in elderly persons and are associated with a detrimental effect on activities of daily living (ADL) and health-related quality of life (QoL). It is important to ascertain the urinary state of the elderly persons, which can lead to take best care of them. In Japan, Kaigo Hoken, the long-term care insurance system for the elderly, started in 2000. Under this system, a special day care service was established in order to continue outpatient physical rehabilitation for the elderly. However, the role of physical rehabilitation on the bladder function has not been well understood. The purpose of this study was to assess the prevalence of urinary disturbances and relationships between ADL and urinary disturbances in elderly persons who regularly visit a day service center.

### Study design, materials and methods

With informed consent, elderly persons who regularly visit a day service center completed an anonymous questionnaire on November 2013. The self-reported questionnaire consisted five items: (1) age, (2) sex, (3) previous history of visiting a urological clinic or hospital, (4) urinary symptoms (nocturia, urgency incontinence, and weak urinary flow), and (5) QoL and bother score. The urinary symptoms, QoL, and bother were scored from 0 (delighted) to 2 (terrible).

### Results

Seven hundreds thirty-three elderly (70 men and 663 women, average 77.8 aged) completed the study. Of all responders, 11.1% had visited a urological clinic or hospital. On global impact on ADL by urinary symptoms, 19.9% was answered as affected, 71.5% not affected, and 8.6% unknown. In urinary symptoms, nocturia score was  $1.00 \pm 0.76$  (0 time/night 24%, 1-2 time/night 57%, more than 3 times/night 14%, and unknown 5%). Urgency incontinence score was  $0.46 \pm 0.91$  (no pads 75%, sometimes pads use 12%, always pads use 5%, and unknown 8%). Weak urinary flow was shown in 71 subjects (9.2 %). QoL score was  $0.99 \pm 1.06$ . Bother score was  $0.41 \pm 0.79$ . Univariate analysis revealed that age was associated with a significant increase in the risk of nocturia, urgency incontinence, and bother score ( $p < 0.05$ ). However, sex did not affect these parameters.

### Interpretation of results

We found that age exhibited the strongest impact on the prevalence of urinary disturbances, but not sex, suggesting that inevitable change may occur with age. We also found that the prevalence of urinary symptoms was low in the elderly who regularly visit a day service center for physical rehabilitation, suggesting that urinary symptoms may be influenced by ADL (i.e., physical activity).

### Concluding message

In elderly persons, urinary disturbances were associated with not only age but also ADL. Therefore, rehabilitation to reduce disuse atrophy (i.e., sarcopenia) is effective for not only an increase in physical activity but also prevention of urinary disturbances.

### References

1. Clinical features and problems of urinary symptoms in elderly persons. Nishinohon J Urol 2014.
2. Epidemiologic survey of lower urinary tract symptoms in Japan. Urology 2006.

### Disclosures

**Funding:** NA **Clinical Trial:** Yes **Public Registry:** No **RCT:** No **Subjects:** HUMAN **Ethics Committee:** Ryukyu University **Helsinki:** Yes **Informed Consent:** Yes