

A NEGATIVE ASSOCIATION BETWEEN UNCOMPLICATED CYSTITIS IN WOMEN AND WIPING METHOD OF THE VULVA AFTER BOWEL MOVEMENTS

Hypothesis / aims of study

In Japan, women are often taught to wipe the vulva from the urethra toward the anus after bowel movements to prevent cystitis from childhood. In the Western countries, similar care is recommended with regard to cystitis prevention. However, there have so far been few reports regarding whether vulva care after bowel movements plays a role in the risk of uncomplicated cystitis of women. Therefore, we considered whether vulva care after the bowel movement in women may be a risk factor for developing cystitis. Furthermore, we examined the factors that affected the vulva care style after bowel movements in women.

Study design, materials and methods

Two hundred seventy-four women were enrolled in this study in the department of Urology in our hospital and cooperative hospitals. A total of 274 women were divided into two groups, UA group and AU group, with the different direction of wiping method of their vulva after bowel movements. UA group wiped their vulva from the urethra toward the anus, and AU group was wiped their vulva from the anus towards the urethra. They were investigated about the past history of cystitis. Of 274 women 171 had uncomplicated cystitis diagnosed with physical examination and urinalysis. Non-cystitis group contained 103 women, including 83 women visited our hospital without urinary tract infection and 20 healthy volunteers. These women were investigated using our original questionnaire how to the vulva care were made after bowel movements, the restroom style (Western style or traditional Japanese squatting style) and their characteristics (age, activities of daily living; ADL, underlying disease, body mass index; BMI). We analysed the association between the uncomplicated cystitis onset and the vulva care after bowel movements. In addition, the association between the vulva care methods, the restroom style and their characteristics was analysed. We used Student's *t*-test and Chi-square test for statistical analysis.

Result

Of all 274 women, 71.9% were wiping from the urethra toward the anus and 28.1% were wiping from anus toward the urethra. Elderly women were significantly wiped from anus toward the urethra ($P=0.023$). However, the characteristics but age was not associated with the direction of wiping their vulva (Table 1).

Between the cystitis group and the non-cystitis group, there was no significant difference in age ($P=0.11$), underlying disease ($P=0.396$), ADL ($P=0.666$), BMI ($P=0.38$), or restroom style ($P=0.056$). Furthermore, 28% women in each group cared their vulva by wiping from the anus toward urethra after bowel movements. As to the association between uncomplicated cystitis and the care method of vulva, there was no significant difference ($P=0.988$) (Table 2).

Interpretation of results

Women are traditionally educated to wipe their vulva from the urethra toward the anus after bowel movements for the prevention of cystitis. However, this study revealed that there is no significant association between vulva care method and the onset of uncomplicated cystitis. Therefore, it is likely that other factors such as voiding dysfunction or organic urinary tract disease play important role in the onset of cystitis in women.

Concluding message

In order to prevent cystitis, education for women how to wipe their vulva after bowel movements may not be a critical factor.

Table 1. Characteristics of two different vulva care groups

| | Urethra to the anus(UA) (n=197) | Anus to the urethra(AS) (n=77) | P Value |
|------------------------|------------------------------------|-----------------------------------|---------|
| Age (Median) | 16 - 89 (62)y | 18 - 98 (69)y | 0.023 |
| underlying disease | 78 (39.6 %) | 32 (41.6%) | 0.766 |
| poor ADL | 22 (11.2 %) | 13 (16.9 %) | 0.203 |
| BMI (Median) | 15.8 - 37.8(21.9) | 15.8 - 33.3(22) | 0.174 |
| Western style restroom | 186 (94.4 %) | 70 (90.1 %) | 0.512 |

ADL; activities of daily living, BMI; body mass index

Table 2. Characteristics of the cystitis group and the non-cistitis group

| | Cystitis group (n=171) | Control group (n=103) | P Value |
|------------------------|------------------------|-----------------------|---------|
| Age (Median) | 16 - 84 (67) y | 23 - 90 (64) y | 0.110 |
| underlying disease | 72 (42.1 %) | 38 (36.9 %) | 0.396 |
| poor ADL | 23 (13.5 %) | 12 (11.7 %) | 0.666 |
| BMI (median) | 15.8 - 37.6 (21.90) | 15.8 - 30.9 (22.03) | 0.380 |
| Western style restroom | 157 (91.8 %) | 99 (96.1 %) | 0.056 |

| | | | |
|---|-----------|-----------|-------|
| Direction of wiping (anus → urethra) | 48 (28 %) | 29 (28 %) | 0.988 |
|---|-----------|-----------|-------|

ADL; activities of daily living, BMI; body mass index

Disclosures

Funding: none **Clinical Trial:** No **Subjects:** HUMAN **Ethics Committee:** Institutional Review Board of Saga University
Helsinki: Yes **Informed Consent:** Yes