

ASSOCIATIONS BETWEEN AGE AND LOWER URINARY TRACT SYMPTOMS IN A POPULATION-BASED COHORT WITH PROSTATE VOLUME LESS THAN 25CM³

Hypothesis / aims of study

Age, prostate volume, and body mass index (BMI) have been known as having a role in development of lower urinary tract symptoms (LUTS) due to benign prostatic hyperplasia. However, these associations have not been studied in patients with small prostate volume. The authors examined the associations between age, prostate volume, BMI and LUTS in a community-based population of Korean men with prostate volume less than 25cm³, who were enrolled in a large-scale screening program.

Study design, materials and methods

Of 35,223 men who enrolled in the Korean Prostate Health Council Screening Program from January 2001 to December 2011, 3326 men with prostate volume less than 25cm³ were included in this study. Men with a serum PSA level of >10 ng/mL or younger than 40 years were excluded. LUTS was defined as the sum of IPSS more than 8. These men were divided into two groups according to LUTS. Prostate volume was measured through transrectal ultrasonography. T-test and logistic regression analysis were used to describe the associations between age, prostate volume, BMI and LUTS.

Results

Among 3326 men with prostate volume less than 25cm³, there were 2872 men (86.3%) with LUTS. Men with LUTS (68.7±8.4 years) were significantly older than men without LUTS (65.4±9.0 years, p=0.001). There was no mean prostate volume difference between men with LUTS (19.6±3.2 cm³) and without LUTS (19.6±3.3 cm³, p=0.980). There was also no mean BMI difference between men with LUTS (23.2±3.0 kg/m²) and without LUTS (23.3±3.1 kg/m², p=0.301). Logistic regression analysis revealed that old age was more likely to have LUTS (odds ratio=1.044, 95% confidence interval: 1.033 to 1.056, p=0.001). As the age increased, the LUTS rate increased (Table 1). In cases of age of more than 50 years, LUTS rates approached 80% although prostate volume was less than 25cm³.

Interpretation of results

LUTS prevalence was relatively high in men with prostate volume less than 25cm³. Age was significantly associated with LUTS in men with prostate volume less than 25cm³. Prostate volume and BMI were not significantly associated with LUTS in these men.

Concluding message

Age was significantly associated with LUTS in a population-based cohort with prostate volume less than 25cm³. LUTS should be identified in men aged more than 50 years although they had small prostate.

Table 1. Men with lower urinary tract symptoms according to stratified age groups.

Age groups (years)	Lower urinary tract symptoms rate % (n)
40 ≤ < 45	77.8% (14/18)
45 ≤ < 50	69.8% (37/53)
50 ≤ < 55	77.0% (104/135)
55 ≤ < 60	77.8% (273/351)
60 ≤ < 65	84.3% (409/485)
65 ≤ < 70	87.6% (595/679)
70 ≤ < 75	88.7% (709/799)
75 ≤ < 80	90.3% (484/536)
85 ≤	91.5% (247/270)

Disclosures

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