Is Type-2 Diabetes Mellitus Associated with Overactive Bladder Symptoms in Men with Lower Urinary Tract Symptoms?


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OBJECTIVE: To elucidate the relationship between type-2 diabetes mellitus (DM) and overactive bladder symptoms in men with lower urinary tract symptoms (LUTS), after adjusting for the impact of age and prostate volume.

MATERIALS AND METHODS: Data were obtained from a prospectively maintained database of 905 first-visit patients with LUTS and benign prostatic hyperplasia. After excluding those with comorbidities that may affect urinary symptom, we selected 139 patients with type-2 DM and 139 nondiabetic controls matched by propensity scoring for age and prostate volume.

RESULTS: There were no differences in voided volume and maximal flow rate between the 2 groups, whereas residual urine volume was significantly higher in DM patients than controls (29.34 ± 26.99 mL vs 22.45 ± 23.25 mL; P = .028). The total International Prostatic Symptom Score was significantly higher in DM patients than controls (17.80 ± 7.60 vs 15.88 ± 7.05; P = .031). Storage (7.45 ± 3.21 vs 6.58 ± 3.11; P = .024) and postmicturition (2.57 ± 1.49 vs 2.19 ± 1.59; P = .045) symptom scores were higher in DM patients than controls, whereas the groups had similar voiding symptom scores (P = .104). Among storage symptoms, DM patients had higher frequency (P = .010) and nocturia (P = .003) scores but similar urgency scores. The Overactive Bladder Symptom Score was also significantly higher in DM patients; this difference was due to a higher nocturia (but not urgency) score.

CONCLUSION: DM patients with LUTS and benign prostatic hyperplasia had greater storage and postmicturition symptoms than age and prostate volume-matched controls. The disparity in storage symptoms was mainly because of frequency and nocturia rather than urgency.