

METABOLIC SYNDROME AND SMOKING ARE ASSOCIATED WITH AN INCREASED RISK OF NOCTURIA IN MALE PATIENTS WITH BENIGN PROSTATIC ENLARGEMENT.

Hypothesis / aims of study

There is a growing interest between lifestyle, metabolic abnormalities and lower urinary tract symptoms (LUTS), particularly storage symptoms. Aim of our study was to evaluate the relationship between smoking, metabolic syndrome and nocturia in patients with LUTS and benign prostatic enlargement (BPE).

Study design, materials and methods

From 2009 onward, a consecutive series of patients with LUTS-BPE were enrolled. Patients on LUTS medical treatment were excluded. Patients were evaluated using the International Prostate Symptom Score (IPSS) including the voiding (vIPSS) and storage (sIPSS) subscore and transrectal ultrasound prostate volume assessment (TRUS). Body mass index (BMI), waist circumference and blood pressure were measured. Blood samples were collected for prostate-specific antigen (PSA) levels, fasting glucose levels, triglyceride levels and high-density lipoprotein levels. Metabolic syndrome (MetS) was defined according to Adult Treatment Panel III (ATP III). Moderate/severe nocturia was defined as nocturia episodes ≥ 2 .

Results

492 patients were enrolled with median age of 68 years (IQR 61/74) and PSA of 6 ng/ml (IQR 4/9). Median BMI was 26.5 kg/m² (IQR: 24/29) and median TRUS was 50 ml (IQR: 37/72). Median IPSS was 9 (IQR 4/14); moderate/severe nocturia was reported in 212/492 (43.1%). Overall 147/492 (29.9%) presented the MetS and out of them 89/147 (60.5%) presented a moderate/severe nocturia ($p=0.001$). Overall 105/492 (21.3%) were smokers and out of the 54/105 (51.4%) presented moderate/severe nocturia ($p=0.034$). Patients with moderate/severe nocturia were older ($p=0.001$) and with larger prostate volume ($p=0.002$). On multivariate analysis, Age (OR: 1.067 per year, 95%CI: 1.036 – 1.098; $p=0.001$), TRUS (OR: 1.011 per ml, 95%CI: 1.003 – 1.019; $p=0.006$) MetS (OR: 2.509, 95%CI: 1.571 – 4.007; $p=0.001$) and smoking (OR: 1.861, 95%CI: 1.088 – 3.185; $p=0.023$) were independent risk factors for nocturia severity.

Interpretation of results

In our single center study MetS and smoking doubled the risk of moderate/severe nocturia in patients with LUTS and BPE.

Concluding message

Although these results should be confirmed, and the pathophysiology is yet to be completely understood, assessment of patients smoking and metabolic status is suggested in patients with LUTS/BPE and possible implications for treatment should be considered.

References

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Disclosures

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