RELATIONSHIP BETWEEN SERUM TESTOSTERONE AND NOCTURIA IN MEN WITHOUT BENIGN PROSTATE ENLARGEMENT

Hypothesis / aims of study
To clarify the relationship between serum total testosterone and nocturia in males without an enlarged prostate.

Study design, materials and methods
Among the 1029 male patients who visited our clinic for health screening from January 2010 to July 2014, 596 patients without benign prostate enlargement (BPE) were analyzed. To evaluate the effect of serum total testosterone on prevalence of nocturia and number of nocturia episodes, multivariate analyses were performed including the covariates of age, International Prostate Symptom Score (IPSS), International Index of Erectile Function (IIEF) score, body mass index, prostate specific antigen, prostate volume and maximal urinary flow rate.

Results
Mean prostate volume was 21.70±4.34 cm³ and prevalence of nocturia (≥ 2 times/night) was 22.1%. On multivariate linear analysis, serum testosterone level was not significantly associated with severity of nocturia. However, in regard to the relationship between prevalence of nocturia and serum testosterone, prevalence of nocturia was significantly positively associated with age (OR 1.048, P = 0.005), total IPSS (OR 1.217, P <0.001) and testosterone level (OR 1.115, P = 0.041).

Interpretation of results
In this retrospective study representative of middle and older men without BPE, subjects with higher serum testosterone levels were at an increased risk for nocturia. In addition, age and the total IPSS were significantly related to nocturia.

Concluding message
Serum total testosterone level is significantly positively associated with the prevalence of nocturia. Therefore, in men without enlarged prostate, testosterone may have an opposing role in the etiology of nocturia.

Disclosures