A Study of Correlations Among International Prostate Symptom Score, Prostate Volume and Serum PSA in Korean Men with Lower Urinary Tract Symptoms

Introduction and Objective: Lower urinary tract symptoms (LUTS) are a common symptom of ageing men. The prostate volume (PV) is a significant predictive factor for progression of benign prostatic hyperplasia (BPH) and serum prostate-specific antigen (PSA) may be used as a reliable tool for estimating prostate volume (PV) in men with LUTS. This study was aimed to investigate the possible correlation International Prostate Symptom Score (IPSS), PV and serum PSA level in male with LUTS.
Materials and Methods: From 2001 to 2011, men aged 40–99 years with lower urinary tract symptoms (LUTS) were enrolled into this multicentre study. Data were collected from 36632 patients. Baseline PV and serum PSA was determined using standard techniques. Also we did questionnaires IPSS and Quality of Life (QoL) by interview. All patients who had a baseline PV ≤ 200 ml, as well as a baseline serum PSA 0–10 ng/ml, were included. Patients with a history of prostate surgery, prostate cancer and conditions other than BPH at baseline were excluded.
Results: The analyses included 32620 patients with a mean age of 69.65 ± 8.337 years, mean baseline PV 29.85 ± 13.761 ml, and mean PSA 1.47 ± 1.47 ng/ml and mean IPSS 15.37 ± 8.35 scores. PV and serum PSA as well as IPSS and QoL increases with age. Score of IPSS was positive correlation with PV, serum PSA and QoL ($r = 0.10$ $p < 0.05$, $r = 0.09$ $p < 0.05$, $r = 0.67$ $p < 0.05$). PV was positive correlation with score of IPSS, serum PSA and QoL ($r = 0.17$ $p < 0.05$, $r = 0.48$ $p < 0.05$, $r = 0.08$ $p < 0.05$).
Conclusion: This study suggests that age, score of IPSS and serum PSA can predict the prostate enlargement to be useful for therapeutic management. Therefore, in the absence of reliable direct measurement of PV, age, score of IPSS and serum PSA determination may be used to optimize patient management.