

EVALUATION OF BLADDER WALL THICKNESS, POST-VOID RESIDUAL VOLUME, PROSTATE VOLUME, OAB-V8 QUESTIONNAIRE AND INTERNATIONAL PROSTATE SYMPTOM SCORE (IPSS) OF PATIENTS UNDERGOING TRANSRECTAL ULTRASOUND

Hypothesis / aims of study

Prostatic benign hyperplasia (PBH) is being recognized as a growing health problem worldwide. The incidence of Benign Prostatic Hyperplasia (BPH) has rapidly increased as life expectancy has risen and is now the most common disease in the aging male. Association between PBH and overactive bladder is not uncommon. Patients may present with urgency and urge-incontinence. Quantification of symptoms using the IPSS should be carried out during the initial evaluation. A safe and effective method to evaluate the deleterious effects of bladder outlet obstruction is not yet known. The thickness of the bladder wall measured sonographically has been advocated as a minimally invasive technique and has been widely discussed (1,2). In the present study, we analyzed variables as bladder wall thickness (BWT), post-void residual volume, prostate volume, IPSS and OAB-V8 questionnaire in men who underwent transrectal ultrasound.

Study design, materials and methods

This prospective observational study included patients who underwent transrectal ultrasound (TRUS) guided prostate biopsy under local anesthesia from January to July 2007. Only patients who had a pre-void bladder volume ranging from 150 to 300 ml in the transrectal ultrasound evaluation were eligible for the study. Several clinical, laboratory and ultrasound parameters were collected including PSA, pre and post-void bladder volume, BWT, prostate volume, IPSS and fluxometry.

Results

Data from 22 consecutive patients were available. The mean age was 66.5 years (+/- 7.02 years). Median PSA was 7.3 ng/mL (ranging from 3.2 to 55.7 ng/mL). Mean prostate volume (TRUS) was 49.32 (+/- 20.2) cm³. IPSS score ranged from 1 to 30 (median = 11.5). Mean BWT was 6.11 (+/- 1.44) mm. Bivariate analysis showed no statistical difference between stratified IPSS and BWT ($p=0.55$), and no statistical difference between stratified BWT and post-void residual volume ($p=0.51$). When comparing stratified IPSS (mild versus severe symptoms) and prostate volume, statistical significance was seen (Mann-Whitney, $p<0.002$). There was no statistical difference when comparing mean peak urinary flow to post-void residual volume ($p=0.09$).

Interpretation of results

In the present study, patients with higher IPSS scores had larger prostate volumes (ultrasound evaluation). However, there was not statistical difference between mean BWT and parameters as post-void residual volume, IPSS and OAB-V8 score.

Concluding message

The clinical relevance of bladder wall thickness and its association with symptoms of overactive bladder or bladder outlet obstruction should be further studied.

Key Words: Prostate; Bladder obstruction; Ultrasonography; Urinary Incontinence

References

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Disclosures

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