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Title: THE CORRELATION OF URODYNAMIC STUDY WITH LOWER URINARY TRACT SYMPTOMS AND PROSTATE VOLUME PARAMETERS IN THE EVALUATION OF THE BPH

Aims of Study:

It is difficult to assess the severity of BPH both objectively and quantitatively. Although pressure flow study is thought to offer the most reliable information regarding the degree of BPH, the invasive nature of pressure flow study (PFS) limits its use. The most useful clinical tool to assess prostate volume is transrectal ultrasonography (TRUS). There were several reports of assessing the severity of BPH both objectively and quantitatively using TRUS ; transitional zone index (TZI), resistive Index (RI), presumed circular area ratio (PCAR). This study aims to examine the predictive value of ultrasonic measurements obtained by TRUS for infravesical obstruction as evaluated by PFS.

Methods:

Among the men over 50 years old with symptoms of BPH, 69 men in which bladder outlet obstruction were confirmed by PFS were prospectively analysed . All men were requested to undergo measurement of IPSS, prostate volume parameters (PV, TZV, TZI, RI, PCAR) and PFS (Qmax, PdetQmax, Pdetmax, Abrams-Griffiths number; AG number). IPSS and urodynamic parameters were compared to prostate volume parameters using simple and multiple regression analysis.

Results:

Simple regression analysis demonstrated that TV and PCAR correlated significantly with all urodynamic parameters. Qmax was significantly correlated with all prostate volume parameters. Multiple regression analysis showed that PCAR was the only significant independent determinant of IPSS, Qmax, Pdetmax, Pdetmax, AG number. A receiver operator characteristics curve analysis showed that 0.8 was the most suitable cutoff value of PCAR for the prediction of infravesical obstruction with a diagnostic accuracy of 75.3%.

Conclusions:

TV and PCAR were useful as transrectal ultrasonic measurements in assessing the severity of BPH in men with lower urinary tract symptoms. However, PCAR was a only significant independent determinant of the severity of BPH using a cutoff value 0.8.

Key Words: LUTS, Urodynamic study, BPH, Prostate Volume parameters.