COMPARATIVE STUDY OF NON-INVASIVE BLADDER PRESSURE AND URODYNAMIC EVALUATION IN MEN WITH LUTS

Aim of Study – Invasive pressure flow analysis is the gold standard for discriminating hypocontractile detrusor and infravesical obstruction in male patients with lower urinary tract symptoms (1). Previous studies show it is possible to diagnose infravesical obstruction on basis of a combination of maximum flow rate and isovolumetric bladder pressure (2, 3) When an external catheter was utilized it can occur an elasticity of the condom and damping of the bladder pressure. The purpose of this study is to analyze the results of non-invasive isometric bladder pressure measured by a catheter in the fossa naviculares of the urethra and compare the results with flow/pressure study.

Method - Fifty male patients with lower urinary tract symptoms were evaluated by flow/pressure study and non-invasive isometric bladder pressure. A catheter was developed to adapt in the fossa naviculares of the urethra to avoid leakage during micturation and when the catheter was occluded. When the catheter was occluded was possible measured the isometric bladder pressure. The urinary flow was measured and the isometric bladder pressure was registered when the catheter was occluded In both study the Abrams Griffith number was utilized to evaluate bladder outlet obstruction Kappa coefficient was used for statistical analysis.

Results - Of the 50 patients studied, 17 were excluded because their Abrams Griffiths Number were in dough range. The statistical results comparing non invasive bladder pressure to urodynamic evaluation shoed 87% sensitivity, 88% specificity, positive predictive value 93,35 and negative predictive value of 80%.

Conclusion - Non invasive isometric bladder pressure analyzed with urinary flow present very close results to flow/pressure study and should be used in male patients who presents lower urinary tract symptoms.

References

1. Validity of a non-invasive determination of the isovolumetric bladder pressure during voiding in men with LUTS. Neurourol Urodyn 1999 18 477-486