

COULD NON-INVASIVE UROFLOWMETRY PARAMETERS CHANGE THE DIAGNOSIS OF BLADDER OUTLET OBSTRUCTION IN MALE PATIENTS?

Hypothesis / aims of study

Urodynamic study (UDS) is a part of the work-up in patients with suspected bladder outlet obstruction (BOO). The effect of non-invasive uroflowmetry (NIUFM) parameters on the diagnosis of BOO at pressure-flow study (PFS) was evaluated.

Study design, materials and methods

Retrospective review of IRB-approved UDS database between 9/2012 and 9/2013.

Results

118/199(58%) adult male patients with suspected BOO underwent UDS. 84/118(71%) with a mean age of 66.3 had successful NIUFM before UDS. 43/84(51%) had equivocal PFS (16/43) or BOO (27/43) based on Abrams-Griffith number (AGN). Maximal flow rate (MFR) at NIUFM was used to define "adjusted" AGN (AAGN). In equivocal BOO group, 4/16(25%) had a significant reduction in AAGN (28.7vs14.1,p=0.0077) along with significantly higher MFR (ml/sec) (13.4vs6.1,p=0.0077) and insignificant change in mean voided volume (ml) (VV) (363.8vs246.3,p=0.44) and mean post-voided residual (ml) (PVR) (265vs373,p=0.3) between NIUFM and PFS, respectively. In BOO group, 5/27(19%) had a significant reduction in AAGN (45.0vs33.8,p=0.025) along with significantly higher MFR (8.4vs2.8,p=0.026) and insignificant change in mean VV (71vs65.4,p=0.84) and mean PVR (65.4vs158,p=0.08) between NIUFM and PFS, respectively.

Interpretation of results

UDS is an accessory tool in the diagnosis of patients with BOO. However, our study showed that 25% of patients with equivocal and 19% with BOO at PFS could have unobstructed AAGN due to significantly higher MFR at NIUFM. The difference in MFR could be explained by the presence of partially obstructing urethral catheter that could bias PFS results. We propose the use of AAGN as an important tool to distinguish patients with true BOO.

Concluding message

UDS and NIUFM are important tests in the work-up of male patients with suspected BOO. In a case of an equivocal BOO or in a presence of BOO on UDS, significant difference between NIUFM and PFS parameters could be an important adjunct to make a clinical decision true BOO.

Disclosures

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