

## THE ROLE OF NON-INVASIVE PRESSURE FLOW STUDY IN HIGHLY SIMPTOMATIC/BOTHERED MEN WITH BLADDER OUTLET OBSTRUICION

### Hypothesis / aims of study

The gold standard to evaluate BOO is the invasive pressure-flow study. The aim of this study is to evaluate non-invasive pressure flow test to predict BOO before surgery

### Study design, materials and methods

Between January 2008 and february 2009, we prospectively evaluated men with lower urinary tract symptoms (IPSS  $\geq$  18 and QoL > 3) scheduled for complete urodynamic study (UDS). Patients with urinary infection, neurological problems, bladder stones and indwelling catheters were excluded. Patients were underwent non-invasive pressure flow test (Medplus CT 3000 – Dynamed – Sao Paulo- Brazil), just before initiate the UDS. Non-invasive pressure-flow test (NIPF) was performed with a cuff around penile body that allowed registering the pressure necessary to stop urinary flow (MCCP - maximum closure cuff pressure). The MCCP and maximum flow rate were plotted in the NewCastle's Nomogram and classified as: 1) bladder outlet obstruction (BOO) or 2) non obstructed. The UDS was performed following the International Continence Society good urodynamic practice. The pressure-flow study was performed with a 4 F catheter in stand position. The pressure-flow results were plotted in Schafer's Nomogram and patients were classified from I – VI. Patients were considered as having BOO when classified as Schafer  $\geq$  III.

### Results

We evaluated 50 men with mean age of 65 +/- 8 years, IPSS ranging from 24 to 35 and Quality of life score was higher than 4 in all patients. Table 1 shows the results form NIPF and invasive pressure-flow study.

### Interpretation of results

Out of the 17 patients classified as non-obstructed by the non invasive study, 7 patients presented detrusor underactivity, 1 patient had BOO and 9 were non-obstructed with normal pressure-flow study by UDS. In the evaluation of BOO, the non-invasive pressure-flow demonstrated a sensitivity of 87.8 % and a specificity of 80,9%

Table 1. Comparison of Invasive and non-invasive pressure flow study on diagnosis of BOO.

	Bladder Outlet Obstruction	Non Obstructed
Invasive pressure flow study	29	21
Noninvasive pressure flow	33	17

### Concluding message

The non-invasive pressure flow study demonstrated a sensitivity of 87.8 % and a specificity of 80,9% in diagnosis of significant BOO. It should be considered as an important tool in the diagnosis, treatment and follow up of men with voiding symptoms.

<b>Specify source of funding or grant</b>	<b>NONE</b>
<b>Is this a clinical trial?</b>	<b>No</b>
<b>What were the subjects in the study?</b>	<b>HUMAN</b>
<b>Was this study approved by an ethics committee?</b>	<b>Yes</b>
<b>Specify Name of Ethics Committee</b>	<b>Comite de ética da Universidade Federal de São Paulo</b>
<b>Was the Declaration of Helsinki followed?</b>	<b>Yes</b>
<b>Was informed consent obtained from the patients?</b>	<b>Yes</b>