Hypothesis / aims of study
To investigate the significance of uroflowmetry combined with ultrasonic residual urine in evaluation of detrusor function in the patients with benign prostatic hyperplasia (BPH).

Study design, materials and methods
Uroflowmetry combined with ultrasonic residual urine (UCURU) and invasive pressure-flow studies (IPFS) were performed in 150 cases with BPH. Detrusor function was divided into three groups, detrusor overactivity, underactivity and normal according to flow curve shape, maximum flow rate and residual urine. The results from both urodynamic studies were compared using $X^2$ test.

Results
In UCURU, ninety patients had detrusor overactivity, thirty-four patients detrusor underactivity and 26 detrusor normal. In IPFS, one hundred patients had detrusor overactivity 20 patients detrusor underactivity and 30 patients detrusor normal. There were no significant difference of detrusor activities diagnosis between UCURU and IPFS ($P = 1.109$). The sensitivity, specificity, accuracy by UCURU were 75%, 70%, 73% in diagnosis of detrusor overactivity, 80%, 86% and 8%, detrusor underactivity, respectively.

Interpretation of results
IPFS recognized as an accurate assessment of detrusor function. But our study found that there were no significant difference of detrusor activities diagnosis between UCURU and IPFS. It suggest that UCURU can be used to evaluate the detrusor function in the patients with BPH. It is mainly reason that the three parameters of UCURU could complement each other and exclude the role of other interfering factors.

Concluding message
Compared with IPFS, UCURU is also a useful tool in evaluation of detrusor function in patient with BPH.