The correlation between the Madsen 'urge' score and the amplitude of involuntary detrusor contractions increased from the 1st (r=0.1740, p<0.184) to the 2nd (r= 0.3279, p<0.011) and the 3rd study (r=0.3538, p<0.006). A similar behaviour was found for the urge score according to the IPSS (correlation values changed from r=0.2493 (p<0.055) to r=0.4547 (p<0.0001) and to r=0.3793 (p<0.0001) respectively. The lowest urgency score was found in patients who had a stable detrusor in the 2nd or 3rd cystometry even if the first study showed involuntary detrusor contractions. A significant difference was found in the urgency symptoms between patients who became stable and those who remained unstable through the 3 studies (table III).

| Table III | become stable' | 'always unstable' | p≤ (Mann-Whitney U test) |
|---|---|---|---|
| IPSS-4 | 1.8824 ± 1.764 | 3.0667 ± 1.172 | 0.0156 |
| Urge | 0.824 ± 0.857 | 1.5667 ± 0.898 | 0.0128 |

No relation was found between the presence or absence of unstable detrusor and IPSS, IPSS-QL, Total Madsen score or any parameters from the voiding phase of the study.
Group 3: All men with a neuropathic bladder had unstable contractions in all 3 studies.
Conclusions
This study shows a changing incidence of unstable contractions from the first to third study performed. A better correlation between the symptoms of urgency and the presence of detrusor instability was found in the third study. This research strongly supports the use of repeated filling studies during the urodynamic assessment of men with LUTS.

# 39

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Title (type in CAPITAL LETTERS, leave one blank line before the text):

THE CORRELATION OF IPSS, SIMPLE UROFLOWMETRY AND POST-VOID RESIDUAL URINE (PVR)WITH PRESSURE-FLOW STUDIES IN THE DIAGNOSIS OF INFRAVESICAL OBSTRUCTION.

Aims of Study: Pressure-flow studies (PFS) are considered as a golden standard in the diagnosis and quantification of infravesical obstruction due to benign prostatic hyperplasia (BPH). Their invasiveness, however, limits their clinical application where simple uroflowmetry combined with PVR measurement is commonly used as the sole urodynamic study in aging men with lower urinary tract symptoms (LUTS). The aim of this study was to investigate the efficacy of IPSS, uroflowmetric findings and PVR in the prediction of infravesical obstruction which was diagnosed by PFS.
Methods: A total of 76 men with a mean age of 65.2 (range: 41 - 89 years) who have attended our outpatient clinic with LUTS between the years 1999 and 2000 were analyzed in this study. All patients were initially evaluated with physical examination, IPSS, urine analysis, renal and bladder ultrasonography and simple uroflowmetry with PVR measurement. Within 2 weeks after completing the first evaluation, all patients underwent additional urodynamic studies including a filling cystometrogram and a PFS. All urodynamic tests were performed on UD-2000 (Medical Measurement Systems, The Netherlands) urodynamics unit. Obstruction was defined according to ICS-nomogram and quantified with AG number [1]. The IPSS, PVR values and uroflowmetric

parameters such as maximum flow rate (Qmax), average flow rate (Qave), time to initiation of flow and voiding time were correlated with AG number. In addition, the diagnostic accuracy, sensitivity and specificity of different Qmax, Qave and PVR cut-off levels were analyzed.

Results: In the whole study group, 45 patients (59%) have been found to be obstructed according to ICS nomogram in PFS whereas 24 (32%) were classified as unobstructed and 7 (9%) as equivocal. Seven equivocal patients were further classified as obstructed according to P-Q slope [1]. Linear regression analysis revealed no significant correlation between AG-number, IPSS and following uroflowmetric parameters: Qmax, Qave, time to initiation of flow, voiding time, Qmax/voiding time, time to Qmax/voiding time, Qave/Qmax (All $r^2$ values < 0.1). In the prediction of obstruction, the accuracy, sensitivity and specificity rates of two different Qmax cut off levels, 10 ml/sec and 15 ml/sec have been found to be 57%, 56%, 58% and 67%, 87%, 25%, respectively. Also, the accuracy, sensitivity and specificity rates of two different Qave cut off levels, 5 ml/sec and 8 ml/sec have been found to be 68%, 80%, 42% and 83%, 96%, 32%, respectively. There was a significant difference between obstructed and un-obstructed patients in terms of PVR volumes (Student-t test, p=0.0008). However, the linear regression between PVR measurements and AG-number was found to be statistically not quite significant with a weak correlation (p=0.08, r=0.2).

All patients with a PVR higher than 100 ml were found to be obstructed according to ICS-nomogram leading to a specificity and positive predictive value of 100% for PVR. However, the same cut-off level for PVR revealed relatively low accuracy and sensitivity rates with 40% and 13.4%, respectively.

Conclusion: There is a considerable discrepancy between IPSS, findings on simple uroflowmetry and obstruction as defined by ICS nomogram and AG number in aging men presenting with LUTS. These findings suggest a multi-factorial etio-pathology of voiding dysfunction in the elderly male population and the lack of specificity of the current evaluation criteria.

References:

1. The Abrams-Griffiths nomogram. World J Urol, 13:34-9, 1995.

# 40

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Title (type in CAPITAL LETTERS, leave one blank line before the text):

POSSIBLE DIFFERENCES IN INNERVATION BETWEEN ANTERIOR FIBROMUSCULAR STROMA AND OTHER REGIONS OF THE PROSTATE

Aims of Study

According to McNeal's zonal anatomy (1), the prostate has the anterior fibromuscular stroma(AFMS) as non-glandular tisuue composed of smooth muscle and connective stroma surrounding the urethra. Despite detailed anatomical description of the AFMS, its physiological function remains unknown. Recently, we reported the possible contribution of the prostate to micturition mainly through the active movement of the AFMS to open the prostatic urethra (2), and additionally reported the possible involvement of the age-related fibrous change of the AFMS to age-related disturbance of micturition (3). The aim of this study is to reveal possible differences between the AFMS and other prostatic regions focused on peripheral nerve innervation. In this study, we