

## DIFFERENT SUBTYPES OF NEUROGENIC DETRUSOR OVERACTIVITY AND URETHRAL DYSFUNCTION IN VOIDING IN PATIENTS WITH DIABETES MELLITUS.

### Hypothesis / aims of study

Despite possible occurrences of severe consequences in urology, not much attention has been paid to diabetic neuropathy. This situation though has notably changed due to a multitude of experimental and clinical studies as well as new insights regarding the pathogenesis of neuropathies.

### Study design, materials and methods

From 1980 till 2006, 148 patients (72 women, 76 men, mean age: 68 yr) were diagnosed with voiding dysfunction. All of the patients suffered of diabetes mellitus type II for more than 5 years, were treated with insuline for at least 3 years, without any other relevant comorbidities. The patients underwent a full neurological examination and a full internal medicine examination, a full urological examination.

Additionally all of the patients got a conventional videourodynamic.

### Results

By means of detailed routine and functional urologic diagnostics five different types of voiding dysfunction have been determined. We suggest subtypes of neurogenic detrusor overactivity and urethral dysfunction during voiding, because of the morphological and functional changes observed during the conventional videourodynamic assessment.

1. Neurogenic detrusor overactivity: 55 patients (34 women, 21 men)
2. Detrusor underactivity: 44 patients (24 women, 20 men)
3. Acontractile detrusor: 29 patients (4 women, 25 men)
4. Detrusor dyscoordination (dyscoordination of different areas of the detrusor, phenomenon so far not reflected in ICS terminology): 9 patients (3 women, 6 men)
5. Detrusor sphincter dyssynergia: 11 patients (7 women, 4 men)

Unfortunately the ICS terminology at the moment does not support all of these different pathophysiological forms of voiding dysfunction (see group 4) (1).

### Interpretation of results

1. In this study, 5 different forms of detrusor overactivity and urethral dysfunction during voiding with similar clinical symptoms were differentiated.
2. All 5 groups showed an overactive bladder syndrome (urgency, urge incontinence, frequency, nocturia) and post void residual.
3. Due to the results of the conventional videourodynamics, therapy has to reflect the different types of neurogenic detrusor overactivity and urethral dysfunction during voiding with its different underlying causes, some of them even requiring opposite therapeutic regiments.
4. The knowledge of diabetic neuropathy causing voiding dysfunction has to be further improved.

### Concluding message

Even identical lower urinary tract symptoms and signs suggestive of lower urinary tract dysfunction require in diabetic patients at least conventional urodynamics, preferably videourodynamics.

An intense interdisciplinary cooperation involving internal medicine, urology, neurology and gynecology is absolutely necessary.

Thus exact diagnosis, followed by different, partially opposed treatment will improve the prognosis in these patients.

### References

1. Neurourology and Urodynamics, 2002, 21:167-178

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**HUMAN SUBJECTS:** This study did not need ethical approval because Due to the retrospective character neither a vote of the ethics committee nor informed consent of patients had to be obtained but followed the Declaration of Helsinki Informed consent was not obtained from the patients.