

## THE MICTURITION INDEX – A NEW AND SIMPLE NON-INVASIVE SCREENING TEST FOR VOIDING DYSFUNCTION IN MEN.

### Hypothesis / aims of study

Diagnosing voiding dysfunction in men is still a tough challenge for urologists. So far for diagnosing voiding dysfunction there is a high expertise and special education needed. In particular for general practitioners (GP), there are no easy tools beside medical history existing to forward these patients to specialists for further diagnostics, i.e. urodynamics.

With the help of simple datas like voided volume, voiding time and bladder scan, voiding dysfunction can be detected with a high sensitivity, so these patient can be selected for special diagnostics.

### Study design, materials and methods

After a retrospective statistical analysis of data of conventional urodynamics from 1980 till 2007, 3 groups of men were included into the appraisal. Group 1: men with non pathological conventional urodynamics (n=356), group 2: men with bladder outlet obstruction (n=3162), group 3: men with energy using processes of the bladder, i.e. urodynamically effective diverticulum (n=141).

After computerized evaluation, an equation got developed out of normal and pathological micturition data.

### Results

It could be shown, that voided volume, micturition time and post void residual are adequate parameters for simple detection of voiding dysfunction in men without the use of special diagnostics, which needs special education.

By using this equation, over 90 % of voiding dysfunction could get discovered. Specificity was not evaluated because it was not the aim of this study.

This equation got developed:

Micturition index (MI) = voided volume (VV) / micturition time (MT) – radical quantity ( $\sqrt{\phantom{x}}$ ) of post void residual (PVR).

$MI = VV/MT - \sqrt{PVR}$

At this juncture, values of MI > 10 should be credited as non-pathologically, values of MI < 10 are a plea for further more invasive investigation like conventional urodynamics.

### Interpretation of results

With the micturition index, it is possible to detect men with voiding dysfunction fastly, salutary and with a high sensitivity. If MI shows a pathological value, these patients can be sent by GP's or nurses to specialists for further investigation, i.e. urodynamics.

### Concluding message

With this tool, men with voiding dysfunction can get detected earlier by GP's, so these patients can receive the effective treatment regime.

### References

Available from authors on request

<b><i>Specify source of funding or grant</i></b>	<b>None</b>
<b><i>Is this a clinical trial?</i></b>	<b>No</b>
<b><i>What were the subjects in the study?</i></b>	<b>HUMAN</b>
<b><i>Was this study approved by an ethics committee?</i></b>	<b>Yes</b>
<b><i>Specify Name of Ethics Committee</i></b>	<b>Ärztchamber des Saarlandes</b>
<b><i>Was the Declaration of Helsinki followed?</i></b>	<b>Yes</b>
<b><i>Was informed consent obtained from the patients?</i></b>	<b>Yes</b>