

## TREATMENT OF IDIOPATHIC DETRUSOR OVERACTIVITY WITH PROPIVERINE ER – RESULTS OF A PROSPECTIVE OPEN-LABEL STUDY

### Hypothesis / aims of study

Antimuscarinics are considered as the cornerstone of treatment in overactive bladder (OAB). Unfortunately, (video)urodynamic evaluation of the effects of antimuscarinics is only existing to a limited extent. It is not well investigated, whether treatment effects differ in symptomatic patients with OAB compared to patients with urodynamically proven idiopathic detrusor overactivity (IDO). It can be hypothesized, that in urodynamically proven IDO treatment effects are more pronounced than in patients suffering from symptomatic OAB without urodynamically proven detrusor overactivity. Furthermore, medical history, physical examination, uroflow, ultrasound, bladder diary, and assessment of post void residual urine are not sufficient to differentiate between these two clinical entities. Moreover, possible organic causes like diverticulae or vesicoureteral reflux as well as possible neurogenic causes can not be diagnosed with these tools. The aim of this prospective treatment analysis was the evaluation of efficacy of propiverine ER 30 mg in patients with IDO, proven by videourodynamic assessment.

### Study design, materials and methods

Altogether 87 treatment-naive patients with symptoms of OAB were enrolled from April 2011 up to December 2011 in this prospective open-label study. All patients were allocated to an extensive urological diagnostic approach including medical history, physical examination, uroflow, bladder diary, ultrasound of the bladder, the kidneys, and, in male patients, also the prostate. Moreover, Life Quality Index (LQI) and International Prostate Symptom Score (IPSS) were assessed, both in men and women. All patients were allocated to videourodynamic examination. Ruling out clinically relevant post void residual urine, infravesical obstruction and organic causes IDO was diagnosed in 41 of these 87 patients. This patient population comprised 18 females and 23 males with a mean age of 65.6 years. Propiverine ER 30 mg was administered for a treatment period of 4 - 6 weeks, followed by a reassessment, including videourodynamics. The other 46 patients, ruled out to the criteria given above, were assigned to other treatment options. The follow-up of these patients is not given in this paper.

### Results

The IPSS improved from 18 to 9 ( $p < 0.002$ ), and the LQI improved from 5 to 2 ( $p < 0.002$ ). The 24-h frequency was reduced from 18 to 9 ( $p < 0.001$ ). Incontinence episodes per 24 h improved from 5 to 1 ( $p < 0.001$ ). The maximum cystometric capacity in these patients increased significantly from 110 ml to 225 ml ( $p < 0.001$ ). The maximum flow rate improved from 8 ml/s to 16 ml/s ( $p < 0.001$ ). Post void residual urine increased clinically not relevant from 20 ml to 40 ml ( $p < 0.002$ ). The pre-post-comparison of the urodynamic pattern was influenced in 38 of 41 patients.

### Interpretation of results

In patients with urodynamically proven IDO the treatment with propiverine ER 30 mg significantly improved OAB symptoms by reducing 24-hour frequency and incontinence episodes. These findings were further supported by the results of the IPSS and LQI. The videourodynamic assessment showed a statistically significant and clinically relevant increase in the maximum cystometric capacity. Interestingly, but not unexpectedly, the maximum flow rate increased as well. Although post void residual urine increased under therapy, the small volumes are clinically not relevant in the intended patient population. Furthermore, changes in the urodynamic pattern of detrusor overactivity were identified, these findings present work in progress.

### Concluding message

Our results document, that the precise differential diagnosis of the patients is crucial for treatment decisions and its success: Medical history, physical examination, bladder diary, etc. are not sufficient to identify the ideal patient population, in which the utmost beneficial effects of antimuscarinic treatment can be achieved. These beneficial, clinically relevant effects of propiverine ER 30 mg in lower urinary tract symptoms can be verified by videourodynamic assessment.

### Disclosures

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**Clinical Trial:** No **Subjects:** HUMAN **Ethics not Req'd:** of the study design (Observational study). **Helsinki:** Yes **Informed Consent:** Yes