

INVESTIGATION ON AN INDIVIDUALLY ADJUSTED ORAL TROSPIUM CHLORIDE (TC) THERAPY IN PATIENTS SUFFERING FROM NEUROGENIC OVERACTIVE BLADDER

Hypothesis / aims of study

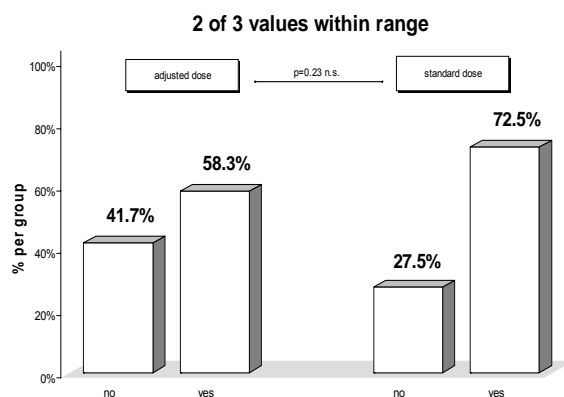
A common principle in therapy of overactive bladder incontinence with anticholinergic drugs is dose titration. By weighing out efficacy versus the intensity of adverse events the optimal individual dose is determined. Also for a treatment with TC urologists recommend a dose adaptation often exceeding the regular daily dose of 45 mg, especially in patients (pat.s) with neurogenic bladder dysfunction. The aim of the study was to determine the optimal individual daily dose of orally applied TC in pat.s with neurogenic detrusor overactivity (lesions between C2 and Th12; reflex arcs S2-S4 intact) and to investigate the possible underlying circumstances e.g. interindividual absorption of the substance.

Study design, materials and methods

A total of 80 male and female pat.s were treated in this double-blind, controlled, randomized multicenter study performed as a parallel group comparison of an increased (up to 135 mg/day) versus a standard dose of 45 mg/ day. Pat.s of both groups received 3 x 15 mg TC/day during the first week of treatment. Success of therapy was determined by assessing the urodynamic parameters maximum cystometric bladder capacity (Vmax), maximum detrusor pressure (pdet) and compliance. If two of these three parameters were out of the pathological range (aim: Vmax >250 ml, pdet ≤40 cm H₂O, compliance ≥ 20 ml/cm H₂O) the pat. continued with 45 mg/ day. If less than two parameters improved the pat. received the next step in the dosage regime (3 x 30 mg or control group 3 x 15 mg) and was assessed again after 7 days. Depending on success of therapy pat.s continued with the increased regime for another 2 weeks or underwent a further adjustment to 3 x 45 mg (respect. 3 x 15 mg in the control group). Safety parameters and incontinence symptoms were monitored too.

Results

The full analysis set included 76 pat.s. In 50 pat.s (66%) the therapy was successful. In the group receiving under double blind conditions the standard dose of 45 mg/die (n=40), 29 pat.s (72.5%) showed an improvement, in the group with dose adjustment (45–135 mg/die) (n=36) the number was 21 (58.3%) (see Tab.1). The difference between both responder groups was not significant (Fisher-Yates-test: p=0.23).



Tab. 1: Improvement of urodynamic parameters: maximum cystometric bladder capacity (Vmax), maximum detrusor pressure (pdet) and compliance

Success of therapy was also reflected by the secondary parameters, e.g. at time of inclusion into the study incontinence symptoms were reported by 92% resp. 90% of the pat.s (adjusted versus standard dose) with or without intermittent catheterization. At the end of therapy 47%

resp. 50% of the pat.s achieved continence. Improvement of incontinence symptoms was already reported after the first week of treatment by 56% resp. 71%.

Adverse events were reported by 23% of all pat.s. The incidence rates of the different symptoms in the overall study population were: dry mouth 36%, dry skin 8%, dysopia 13%, increased heart rate 10%, gastrointestinal disorders 11% and others 10%. There were no significant differences between the treatment groups.

Interpretation of results

The results show that for most pat.s a daily dosage of 45 mg was optimal to improve the symptoms of neurogenic overactive bladder as reflected by the parameters max. detrusor pressure, max. cystometric bladder capacity and compliance, however, some pat.s benefited from an individual dose adjustment. In this population higher doses (90 mg and 135 mg per die) were applied in 19 pat.s, 13 of them (68.4%) achieved success in therapy. The drug was well tolerated in the majority of pat.s.

Concluding message

TC is a drug with proved efficacy and safety for the treatment of pat.s with neurogenic overactive bladder. The standard dose of 45 mg daily is to be considered as optimal for most pat.s. On the other hand it now evident for the first time that 26% of the pat.s benefit from an individual dose adjustment of trospium chloride.

Keywords/ Indexing (Complete): Anticholinergics ; Bladder hyperactivity ; Neurogenic voiding dysfunction

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