

COMBINATION TREATMENT WITH AN α -BLOCKER PLUS AN ANTICHOLINERGIC IMPROVES QUALITY OF LIFE IN PATIENTS WITH BLADDER OUTLET OBSTRUCTION. A PROSPECTIVE, RANDOMIZED, CONTROLLED STUDY.

Aims of Study

To evaluate the effect of tolterodine in combination with an α -blocker (tamsulosin) on the quality of life in patients with bladder outlet obstruction (BOO) and concomitant detrusor instability (1).

Methods

Fifty consecutive patients older than 50 years (mean age 69 ± 7 years, range: 52-80) with urodynamically proven mild or moderate BOO, according to Schafer's nomogram (2), and with concomitant detrusor instability were included in the study. All patients filled in the quality of life QoL 9 UROLIFE questionnaire (3) before entering the study and were thereafter treated with tamsulosin 0,4 mg X 1 P.O. One week later, patients were randomly allocated into two groups: Group A (n=25) continued treatment with tamsulosin only, while Group B (n=25) received additionally tolterodine 2 mg X2 P.O. Essentially, Group A served as control group. In three months time, all patients completed the QoL 9 and were assessed with a new urodynamic study. Urodynamic parameters evaluated pre- and post-treatment included: Maximum detrusor pressure (Pdet max), Maximum flow rate (Qmax), Residual volume of urine (Vres), Bladder capacity (BC), Pressure at maximum instability (Pin max) and Volume at first unstable contraction (Vf con). Statistical analysis was performed using the Student t-test on commercially available software (Graphpad PRISM).

Results

Three patients from Group B stopped tolterodine due to side effects (xerostomia) while two patients from each group stopped tamsulosin because of hypotension. In the tamsulosin group (Group A) the pre-treatment QoL mean score was 542,2 while the post-treatment was 548,2. In the tamsulosin plus tolterodine group (Group B) the pre- and post-treatment mean QoL score was 525,0 and 628,4 respectively. Analysis revealed a statistically significant improvement in the quality of life only in Group B patients ($p=0,0003$). When changes in urodynamic parameters were evaluated in the two groups, a statistically significant difference was noted in both groups post-treatment for Qmax and Vfcon. Additionally, in Group B a statistically significant difference was observed for Pdet max and Pin max post-treatment (Table 1). Further detailed analysis of the scores in each QoL item revealed a statistically significant difference ($p<0,05$) in questions 1-6 for the group receiving tolterodine. Questions 7-9 regarding sexual life were unaffected by treatment.

Conclusions

Combination treatment of an α -blocker (tamsulosin) plus an anticholinergic (tolterodine) improves the quality of life in patients with BOO and concomitant detrusor instability. Objective assessment of this response can be performed urodynamically. In our study, all urodynamic parameters indicating detrusor instability were improved with tolterodine treatment. Interestingly, no incidence of acute urinary retention was observed; tolterodine did not affect the quality of urine flow or the residual urine volume. The proposed combination appears as an effective and safe treatment option in patients with BOO and detrusor instability.

Table 1. Changes in urodynamic parameters after treatment.

	GROUP A		GROUP			B		Post-treatment		p
	Pre-treatment		Post-treatment		p	Pre-treatment		Mean	SEM	
	Mean	SEM	Mean	SEM	p	Mean	SEM	Mean	SEM	p
Pdet cmH2O	70,04	2,09	64,84	2,05	0,0827	69,52	2,39	61,28	1,78	0,0082
Qmax ml/sec	10,30	0,18	11,46	0,20	0,0001	10,46	0,27	11,78	0,29	0,0020
Pin max cm H2O	29,00	1,41	27,84	1,44	0,5690	30,92	1,34	19,76	1,22	<0,0001
Vf con ml	197,2	7,49	227,6	10,04	0,0190	193,20	8,73	293,60	14,15	<0,0001

References

1. Chapple CR, Smith D: The pathophysiological changes in the bladder obstructed by benign prostatic hyperplasia. *Br J Urol* 1994, 73: 117-123.
2. Schafer W, Waterbar F, Langen PH, Deutz FG: A simplified graphical procedure for detailed analysis of detrusor and outlet function during voiding. *Neurourol Urodyn* 1989, 8: 405-407.
3. Lukacs B, Comet D, Grange JC, Thibault P and BPH Group in General Practice: Construction and validation of a short-form benign prostatic hypertrophy health-related quality of life (HRQL) questionnaire (9 items). *Br J Urol* 1997, 80: 722-730.