

MIXED INCONTINENCE: HOW SHOULD IT BE TREATED?**Aims of Study**

Mixed incontinence affects over 40% of women seen for lower urinary tract dysfunction. The combination of detrusor instability and genuine stress incontinence makes treatment of this problem difficult. There are no studies of drug treatment with a single drug using objective outcome measures. Urodynamic parameters do not appear to help in determining which women will benefit from medical treatment or surgical treatment. More recently in a study of 50 women [1] with mixed urinary incontinence who underwent Burch colposuspension, the outcome was better in those women in whom stress incontinence predated urge incontinence.

This study attempts to determine the differences in response to treatment of mixed incontinence with an anticholinergic drug in a 2:1 randomized placebo controlled trial. We compared women who initially developed urge incontinence with those who initially developed stress incontinence.

Methods

Women were recruited into this study with a symptomatic diagnosis of mixed incontinence. Patients were included if they had at least 8 micturitions per 24 hours and 5 incontinence episodes per week as confirmed by 7 day frequency volume diary. These women had to have stress incontinence as well as urge incontinence to be included into the study. They were all asked which incontinence symptom (urge or stress) came first and the women were divided into two groups and analysed based on this division. The women completed 7 day frequency volume diaries which allowed them to note stress incontinence episodes separately from urge incontinence episodes after one and eight weeks of therapy. At the same time Kings Health Questionnaires to assess quality of life were also completed. Data analysed on an intention to treat (ITT) basis and statistical analysis was carried out using a Mann Whitney U test.

Results

854 women were recruited into the study, with 569 receiving tolterodine ER 4mg once-daily and 285 receiving placebo, and the placebo controlled data is shown in Table 1. 416 women (73%) had the symptom of urge incontinence longer than stress incontinence and 151 women (27%) had stress incontinence longer than urge incontinence. There was no difference between the two groups in response to the anticholinergic treatment but there were highly significant reductions in urge and stress incontinence for both groups when compared to baseline. However the reduction in urge incontinence but not stress incontinence was highly significant compared to placebo. Interestingly the reductions in incontinence were similar to that expected in a group of women with only detrusor instability.

Table 1.1 Effect of 1 and 8 weeks' treatment with tolterodine ER 4 mg or placebo on micturition diary variables in patients with mixed incontinence (All data presented as percentage median (25th, 75th interquartiles) and [mean \pm SD] change from baseline)

	Week 1		
	Placebo	Tolterodine ER 4 mg	p-value
Mixed incontinence episodes / week	-35.4 (-61.8, -3.1) [-7.6 \pm 19.8]	-42.9 (-66.4, -14.3) [-10.7 \pm 18.4]	0.0064
Micturitions / 24 hours	-7.7 (-17.3, -1.1) [-0.9 \pm 1.8]	-11.3 (-20.2, -1.1) [-1.2 \pm 1.9]	0.0061
Urgency episodes / 24 hours	-10.6 (-31.0, 13.9) [-0.5 \pm 2.0]	-22.2 (-44, 1.5) [-1.2 \pm 2.2]	<0.0001
Volume voided / micturition (mL)	6.0 (-7.4, 22.0) [12.6 \pm 44.1]	10.2 (-3.8, 28.0) [19.5 \pm 55.9]	0.0157

Table 1.2

	Week 8		
	Placebo	Tolterodine ER 4 mg	p-value
Mixed incontinence episodes / week	-50.6 (-80.0, -12.3) [-12.1 ± 24.6]	-72.9 (-94.6, -38.9) [-17.1 ± 21.8]	<0.0001
Micturitions / 24 hours	-13.8 (-25.6, 0.0) [-1.3 ± 2.3]	-20.0 (-31.9, -7.7) [-2.1 ± 2.4]	<0.0001
Urgency episodes / 24 hours	-19.2 (-46.7, 4.5) [-0.9 ± 2.7]	-37.2 (-74.4, -7.7) [-2.0 ± 3.0]	<0.0001
Volume voided / micturition (mL)	9.0 (-8.4, 26.3) [18.9 ± 51.9]	20.5 (-0.7, 40.7) [33.6 ± 64.7]	<0.0001

Table 2: Symptom of urge incontinence in both groups at baseline and 8 weeks after treatment.

Visit		Urge Incontinence longest	Stress Incontinence longest	Mann Whitney U test P - value
Baseline	Median (std)	16.8 (17.1)	16.0 (14.7)	0.13
Week 8	Median (std)	4.2 (15.7)	2.8 (10.0)	0.24
Percent change at week 8	Median (%)	-76.7	-79.3	0.4500

Table 3. Symptom of stress incontinence at baseline and 8 weeks after treatment

Visit		Urge Incontinence longest	Stress Incontinence longest	P - value
Baseline	Median (std)	4.9 (11.8)	6.3 (19.0)	0.059
Week 8	Median (std)	0.7(10.9)	0.7 (7.8)	0.12
Percent change at week 8	Median (%)	-85.7	-77.8	0.2825

Conclusions

Anticholinergic therapy is an effective treatment for women with mixed incontinence. The chronology in terms of which came first (stress or urge) does not appear to affect the outcome. This would suggest that the etiology of urge incontinence in the mixed population does not influence the response to anticholinergic therapy. Consequently the question as to which came first (stress or urge) should not be used to determine which treatment would be beneficial and medical therapy should always be tried before surgery.

Reference

1. Scotti RJ. Antecedent history as predictor of surgical cure of urgency symptoms in mixed incontinence. *Obstet Gynecol* 1998 Jan; 91(1): 51-4.