#97 The Impact of Frailty on the Treatment of Overactive Bladder in Older Adults

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Funding: Society of Urodynamics, Female Pelvic Medicine and Urogenital Reconstruction (SUFU) and Pfizer Grant for the Study of Overactive Bladder and Urgency Urinary Incontinence

Introduction

- Frailty is a measure of physiologic vulnerability that manifests as increased susceptibility to adverse events such as falls, disability, loss of independence, increased risk of postoperative complications, and death.[1-4]
- The Timed Up and Go Test (TUGT) is a sensitive, specific, and efficient measure of frailty that has a strong independent correlation with poor surgical outcomes.[5,6]
- The impact of frailty on treatment of overactive bladder (OAB),however, is poorly understood.
- The aim of this study is to examine the impact of frailty on treatment outcomes for OAB in older adults starting pharmacotherapy, onabotulinumtoxinA, and sacral neuromodulation.

Methods

- This is a prospective study of men and women ≧60 years of age starting pharmacotherapy, onabotulinumtoxinA, or sacral neuromodulation.
- Subjects were administered questionnaires at baseline, 1- and 3-months.
- Covariates: Frailty was assessed at baseline using the TUGT, whereby a TUGT time of ≧12 seconds was considered to be slow, or frail.
- Outcomes: Response to treatment was assessed using the overactive bladder symptom score (OABSS) and the Overactive Bladder Questionnaire Short Form (OAB-q SF) Bother and Health Related Quality of Life (HRQOL) subscales. Side effects were also assessed via questionnaire.
- Analyses: Mixed effects linear modeling was used to model changes in OAB questionnaires over time both within and between groups (frail vs. non-frail).

Results

Figure 1. CONSORT diagram depicting study enrollment.

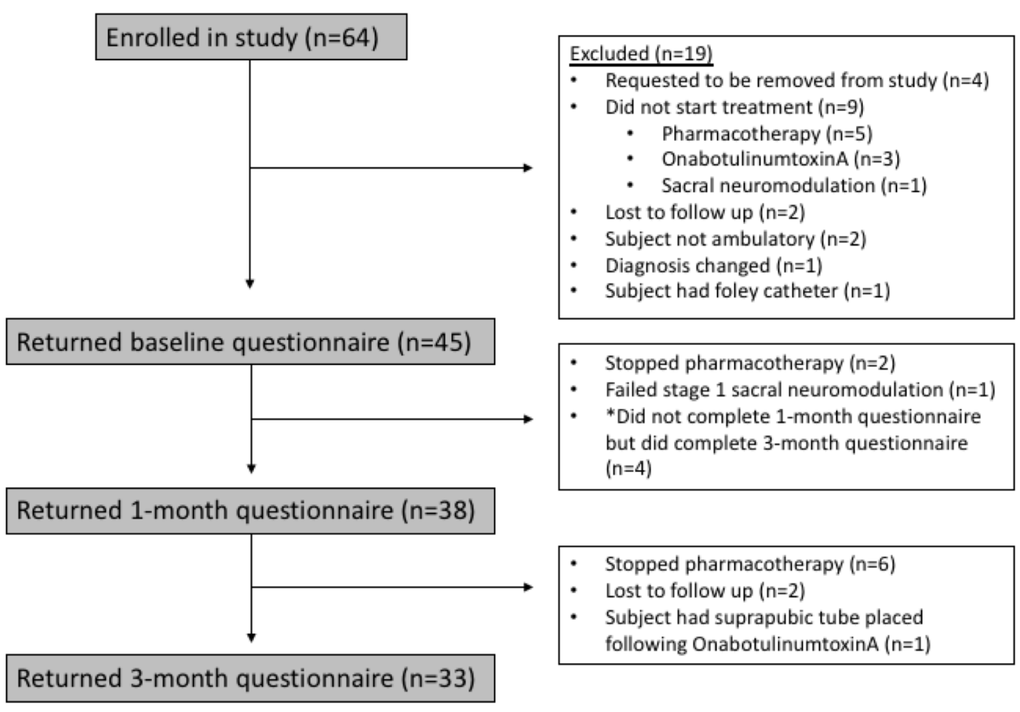

Figure 2. Questionnaire-based treatment responses to OAB treatments stratified by TUGT <12 and TUGT ≧12 seconds. Panel A is the OABSS, B is OAB-q SF and C is OAB-q Bother. All figures are adjusted for age and neurogenic bladder.

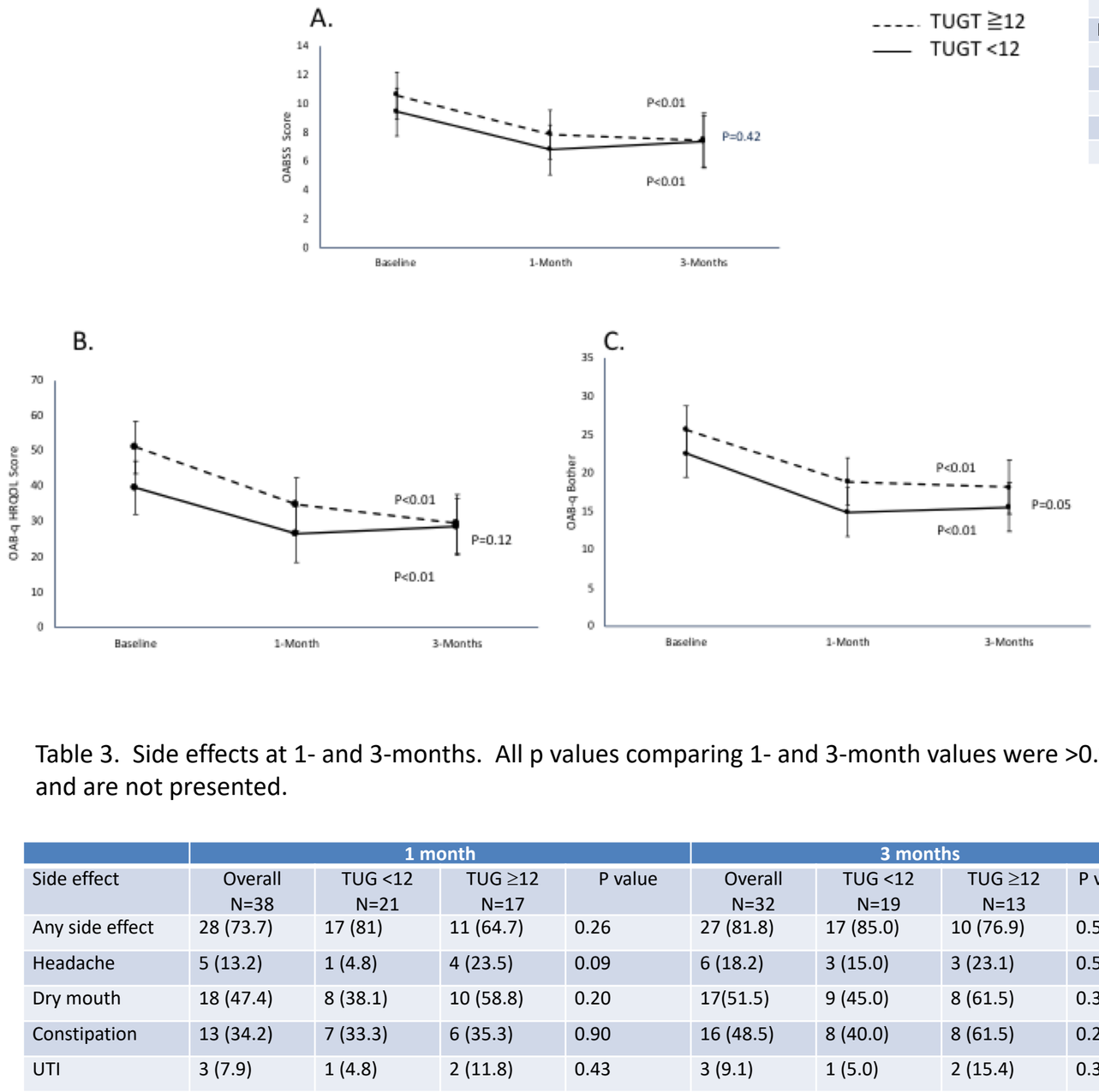

Table 1. Baseline clinical characteristics, questionnaires, prior OAB bladder treatments stratified by TUGT <12 and TUGT ≧12 seconds.

Characteristic	Overall N=45	TUG <12 N=27	TUG ≥12 N=18	P value
Age, mean ± SD	70.3 ± 6.3	69.7 ± 5.3	71.2 ± 7.6	0.43
Female gender, n (%)	31 (68.9%)	18 (66.7%)	13 (72.2%)	0.69
BMI, mean ± SD	31.7 ± 12.5	31.4 ± 15.5	32.1 ± 6.7	0.85
Race/ethnicity, n (%)				
White	34 (75.6)	22 (81.5)	12 (66.7)	0.26
Nonwhite	11 (24.4)	5 (18.5)	6 (33.3)	
Highest level of education, n (%)				
Less than high school	4 (8.9)	1 (3.7)	3 (16.7)	
High school graduate or equivalent	1 (2.2)	0	1 (5.6)	0.17
Bachelors' degree	16 (35.6)	12 (44.4)	4 (22.2)	
Graduate degree	24 (53.3)	14 (51.9)	10 (55.6)	
Total household income in the last year				
<25 K	3 (6.7)	1 (3.7)	2 (11.1)	
25-49 K	7 (15.6)	2 (7.4)	5 (27.8)	
50-99 K	7 (15.6)	4 (14.8)	3 (16.7)	0.16
100-149 K	5 (11.1)	4 (14.8)	1 (5.6)	
≥150 K	5 (11.1)	5 (18.5)	0	
Prefer not to say	18 (40.0)	11 (40.7)	7 (38.9)	
Neurogenic bladder, n (%)	8 (17.8%)	2 (7.4%)	6 (33.3%)	0.03
Multiple sclerosis	2 (4.4%)	0	2 (11.1%)	
Parkinson's Disease	3 (4.4%)	2 (7.4%)	1 (5.6%)	0.04
Other	3 (6.7%)	0	3 (16.7%)	
Number of medications currently taking, mean ± SD	12.7 ± 6.0	12.2 ± 7.0	13.6 ± 4.0	0.46
Baseline PVR, mean ± SD	66.6 ± 6.0	74.9 ± 87.3	53.0 ± 56.5	0.38
Baseline TUGT, mean ± SD	12.3 ± 6.9	8.9 ± 1.5	17.4 ± 8.5	<0.01
Baseline Animal fluency test, mean ± SD	18.4 ± 6.0	19.6 ± 5.5	16.7 ± 6.5	0.12
Baseline Katz ADL, mean ± SD	5.3 ± 0.6	5.5 ± 0.5	5.0 ± 0.6	0.01
Baseline Lawton IADL, mean ± SD	7.2 ± 1.4	7.6 ± 1.2	6.6 ± 1.5	0.04
Baseline general health rating, n (%)				
Excellent	5 (11.1)	3 (11.2)	2 (11.1)	
Very good	9 (20.0)	9 (33.3)	0	0.05
Good	20 (44.4)	11 (40.7)	9 (50.0)	
Fair	10 (22.2)	4 (14.8)	6 (33.3)	
Poor	1 (2.2)	0	1 (5.6)	
Previous treatments tried, n (%)	28 (62.2)	21 (60.0)	7 (70.0)	0.57
Pelvic floor physical therapy (PFPT)	19 (43.2)	12 (44.4)	7 (41.2)	0.83
Medications	28 (62.2)	16 (59.3)	12 (66.7)	0.62
Percutaneous tibial nerve stimulation (PTNS)	4 (8.9)	3 (11.1)	1 (5.6)	0.52
OnabotulinumtoxinA	3 (6.7)	2 (7.4)	1 (5.6)	0.81
Sacral neuromodulation	3 (6.7)	2 (7.4)	1 (5.6)	0.33

Table 2. Type of OAB treatment selected during the study.

Treatment selected, n (%)	Overall N=45	TUG <12 N=27	TUG ≥12 N=18	P value
Medication	22 (48.9)	13 (48.1)	9 (50.0)	0.96
OnabotulinumtoxinA	12 (26.7)	7 (25.9)	5 (27.8)	
Sacral neuromodulation	11 (24.4)	7 (25.9)	4 (22.2)	

Table 3. Side effects at 1- and 3-months. All p values comparing 1- and 3-month values were >0.05 and are not presented.

	1 month				3 months			
Side effect	Overall N=38	TUG <12 N=21	TUG ≥12 N=17	P value	Overall N=32	TUG <12 N=19	TUG ≥12 N=13	P value
Any side effect	28 (73.7)	17 (81)	11 (64.7)	0.26	27 (81.8)	17 (85.0)	10 (76.9)	0.56
Headache	5 (13.2)	1 (4.8)	4 (23.5)	0.09	6 (18.2)	3 (15.0)	3 (23.1)	0.56
Dry mouth	18 (47.4)	8 (38.1)	10 (58.8)	0.20	17(51.5)	9 (45.0)	8 (61.5)	0.35
Constipation	13 (34.2)	7 (33.3)	6 (35.3)	0.90	16 (48.5)	8 (40.0)	8 (61.5)	0.23
UTI	3 (7.9)	1 (4.8)	2 (11.8)	0.43	3 (9.1)	1 (5.0)	2 (15.4)	0.31
Nausea	5 (13.2)	1 (4.8)	4 (23.5)	0.09	6 (18.2)	3 (15.0)	3 (23.1)	0.56
Urinary retention	8 (21.1)	5 (23.8)	3 (17.6)	0.64	4 (12.1)	2 (10.0)	2 (15.4)	0.64
Fatigue	12 (32.4)	6 (28.6)	6 (37.5)	0.57	14 (42.4)	10 (50.0)	4 (30.8)	0.27
Confusion	7 (18.4)	3 (14.2)	4 (23.5)	0.46	5 (15.6)	2 (10.5)	3 (23.1)	0.34
Pain	6 (15.8)	2 (9.5)	4 (23.5)	0.24	9 (27.3)	6 (30.0)	3 (23.1)	0.66

Conclusions

- Adults ≧60 years of age starting second- and third-line treatments for OAB, regardless of TUGT time, demonstrated improvement in OAB symptoms at 3 months.
- These findings suggest that frail older adults may receive comparable benefit and similar rates of side effects compared to less frail individuals.
- Further studies are needed to explore and confirm these findings.

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