incontinence report a worse quality of life when compared to continent women or women with only stress incontinence. A difference in QOL between groups of different types of urinary incontinence was best identified with the IIQ.

Reference
1. Quality Life Res 1994;3:291-306

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Title (type in CAPITAL LETTERS, leave one blank line before the text):

DOSE TITRATION KEY TO OXYBUTYNIN EFFICACY FOR GERIATRIC INCONTINENCE, EVEN FOR DHIC

Aims of Study

Oxybutynin (OXY) for urge urinary incontinence (UI) in the elderly has shown fair efficacy and low tolerability in previous studies. Age-related factors (decreased detrusor contractility, increased response variability, concomitant pathologies and multiple medications) may contribute to these poor results, many having additive effects. We postulated that a stepped approach including both efficacy and side effects might maximize benefit and minimize adverse effects, thus achieving successful pharmacotherapy of geriatric urge UI. The aims of the study were (1) to determine the efficacy of OXY in elderly when individually titrated to side effects and postvoid residual (PVR), and (2) to determine predictors of response to this approach.

Methods

We conducted an 8 week placebo-controlled, blinded randomized clinical trial of community-dwelling, cognitively intact subjects over age 50 with an average urge UI rate of ≥2x/4d. After clinical and videourodynamic evaluation and randomization (3:2 OXY:placebo), dose was adjusted weekly for up to 4 weeks (increased for persistent UI, decreased for PVR >400 ml, and titrated to side effects), then maintained. 3 outcome measures were calculated from 4 day voiding records at baseline and conclusion: % decrease in UI episodes; achievement of clinical "goal" UI rate; and cure (dry). Goal daily UI rate was 0 if baseline UI rate was <2x/d, <1 if baseline was 2-4x/d, and ≥50% decrease if baseline was ≥4x/d. Impaired detrusor contractility (DHIC) was defined by a nonstrained PVR >50 ml.

Results

Of 167 subjects enrolled, we excluded 33 for urodynamic and voiding record criteria. The 39 noncompleters did not differ from the 95 participants in age, sex, and mental status. OXY and placebo groups were statistically equivalent in age (mean 71, range 53-91), sex (89% women), baseline UI rate (mean 2.8, range 0.5-13.3), and percent DHIC (27). Mean OXY dose was 9.4 mg/d, range 2.5-20, mode 2.5 tid. Limiting side effects were most commonly dry mouth, rarely constipation, and once elevated PVR.

	Oxybutynin	Placebo	p
% improved, mean (range)	76 (-174 to 100)	34 (-413 to 100)	0.0001
% achieving UI goal rate	72	34	0.001
% dry	61	17	0.001
% worse than baseline	6	17	0.07
Final daily UI, mean (range)	0.9 (0-9.8)	1.5 (0-5.6)	0.0003
DHIC % improved (range)	73 (-25 to 100)	24 (-155 to 100)	0.06

Incontinence outcomes were superior in those on OXY (table). OXY subjects reached goal UI rate in equal numbers whether impaired or normal contractility (63% v 76%, p=0.3), but fewer with DHIC were cured (38% v 71%, p=0.02). An equivalent number of impaired and normal

contractility subjects on placebo achieved UI goal rate (20% v 41%, p=0.22) and cure (19% v 10%, p=0.5). Percent improvement did not differ significantly in subjects older and younger than 65 on both OXY (78% v 70%, p=0.97) and placebo (40% v 6%, p=0.92). UI was subjectively cured or much better in 81% of OXY and 37% of placebo subjects (p=0.001). Treatment satisfaction rates were high (OXY 96%, placebo 56%, p=0.01).

Predictors of improvement on OXY, controlling for other continence mechanisms, were higher uninhibitable contraction (UC) velocity (r=.54, p=0.0005), lower UC volume (r=-.46, p=0.004) and positive response to bulbocavernosus reflex or voluntary muscle contraction at the bladder neck (r=.55, p=0.004). Lower baseline PVR predicted cure (p=0.04). All men and 55% of women on OXY were cured (p=0.02). On placebo, a lower UC detrusor pressure in subjects with good proprioception (r=-.58, p=0.03) predicted improvement. Age and bladder capacity did not predict improvement on OXY or placebo.

Conclusions

1. Oxybutynin is more effective for urge UI in the elderly than previously reported when started in small doses and individually titrated to symptoms and PVR.
2. Subjects with DHIC improve as often as those with normal contractility, but are less likely to achieve cure.
3. Success with this approach does not diminish with age.
4. Brisk uninhibited contractions at low volumes, as well as functional extension of striated muscle to the bladder neck, predict improvement on oxybutynin.

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CENTRAL MUSCARINIC MECHANISM OF BLADDER OVERACTIVITY ASSOCIATED WITH ALZHEIMER TYPE SENILE DEMENTIA

Aim of study

To investigate the mechanisms of neurogenic bladder overactivity in Alzheimer type senile dementia in a conscious rat model.

Methods

Male Wistar rats were placed in a stereotaxic apparatus, and subjected to bilateral lesion of the basal forebrain by means of ibotenic acid (IA) injection (7.5 mg/rat on each side)(BF rats). Phosphate buffered saline (PBS) was injected to control rats (sham operated rats; SO rats). Cystometrograms (CMG) were obtained 7 to 10 days after IA/PBS injection. After CMG recording, choline-acetyltransferase (CAT) activities in the frontal cortices were assayed to assess the damage to cholinergic neuronal projections from basal forebrain to frontal cortices. The influences of intracerebroventricular administration of Oxotremorine M, muscarinic receptor agonist, or pirenzepine, M1 muscarinic receptor antagonist were investigated in conscious BF or SO rats. Antagonized effects of pirenzepine were also examined in BF rats. The effects of oxotremorine M or pirensepine directly injected into the PMC (pontine micturition center) were examined under urethane anesthesia.