A behavioural management for continence intervention reduced urinary incontinence symptoms in older rural women

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Dougherty MC, Dwyer JW, Pendergast JF, et al. ***A randomized trial of behavioral management for continence with older rural women****. Res Nurs Health 2002 Feb;****25****:3–13.*

QUESTION: In older rural women with urinary incontinence (UI), does a behavioural management for continence (BMC) intervention involving self monitoring, bladder training, and pelvic muscle exercise (PME) with biofeedback reduce the symptoms of UI more than a control intervention?

Design

Randomised {allocation concealed*}†, blinded (outcome assessors)*, controlled trial with up to 2 years of follow up.

Setting

7 rural counties in north Florida.

Patients

218 women who were ⩾55 years of age and living in a private residence and had involuntary urine loss ⩾2 times/week of ⩾1 g/24 hours; symptoms of stress, urge, or mixed incontinence; and no bacteria in their urine. Patients with bladder cancer or kidney disease, an indwelling urinary catheter, residual urine of ⩾100 cc, or need for a caregiver were excluded. 178 patients (82%) (mean age 68 y) completed ⩾1 follow up assessment.

Intervention

Patients were allocated to BMC consisting of self monitoring, bladder training, and PME with biofeedback (n=94) or a control group (n=84). In the BMC group, the study nurse and participant together established the woman's goals for continence. Based on goals and baseline assessment, women started with self monitoring or bladder training. Women started PME with biofeedback if continence goals were not reached with bladder training. BMC lasted up to 24 weeks. Control group patients only received feedback from baseline assessment.

Main outcome measures

The primary outcome was urine loss measured by weighing incontinence pads. Secondary outcomes were episodes of urine loss, micturition frequency, voiding interval, quality of life, and patient report of urine loss.

Main results

Analysis was by intention to treat. From 6–24 months of follow up, patients in the BMC group had less urine loss ($p < 0.001$) and fewer episodes of urine loss ($p < 0.001$) than patients in the control group. Tests on the least squares means showed the difference between BMC and control at each follow up point was statistically significant for urine loss (p=0.01) and episodes of urine loss ($p \leq 0.02$), favouring the BMC group. Greater age predicted greater urine loss and more urine loss episodes. Groups did not differ for micturition frequency or voiding interval. Quality of life measures and patient report of urine loss favoured BMC (p=0.0025). The greatest benefit was seen after the self monitoring and bladder training components of the intervention.

Conclusion

In older rural women with urinary incontinence, a behavioural management for continence intervention reduced urine loss.

*See glossary.
†Information provided by author.

COMMENTARY

UI affects approximately 38% of older women and is associated with increased risk of depression, social isolation, and residential admission. Behavioural therapy for UI usually involves self monitoring, adjustment of caffeine consumption and diet, and PME with or without biofeedback.

A recent systematic review had strong evidence showing that behaviour therapy was more effective than placebo and weak evidence that behaviour therapy was more effective than drug treatment.[1] One recent 8 week study by Burgio *et al*[2] found superiority for behavioural therapy over drug treatment and placebo. In addition, only 14% of those patients receiving behavioural therapy wanted to switch treatment compared with 75.5% of patients in the other treatment groups.

Dougherty *et al's* study, which shows superiority for behaviour therapy over routine care, has some important strengths. Firstly, the study is done in a well defined rural population of patients who have been shown to be at greater risk of morbidity and entry to residential care than their urban counterparts. Secondly, the study had a long follow up of up to 24 months. Thirdly, behavioural treatment was phased according to self monitoring, bladder training, and PME plus biofeedback. Most improvement occurred with either self monitoring or bladder training. However, only a small proportion of participants could be followed up at 18 (30%) and 24 months (21%). In addition, it was unclear what other treatments were used by those participating in the routine care group.

This study adds to the existing evidence on behaviour therapy for UI. The study shows that self monitoring and PME are effective interventions delivered by nurses for older rural women. Furthermore, it appears that the effects of treatment endure.

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1 Berghmans LC, Hendriks HJ, De Bie RA, *et al.* Conservative treatment of urge urinary incontinence in women: a systematic review of randomised clinical trials. *BJU Int* 2000; **85**:254–63.
2 Burgio KL, Locher JL, Goode PS, *et al.* Behavioral vs drug treatment for urge urinary incontinence in older women: a randomized controlled trial. *JAMA* 1998;**280**:1995–2000.

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