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Rating improvements in urinary incontinence: do patients and their physicians agree?

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Abstract

Objective: to determine whether patients' perceptions of improvement following behavioural interventions for urinary incontinence (UI) correspond with physicians' global ratings of change, and to compare both these ratings with more objective UI outcome measures.
Methods: consecutive new female patients aged 65 years and older recruited from outpatient UI clinics in Quebec received a behavioural management protocol for UI. At 3-month follow-up, patients and physicians were independently asked for their global impression of change in UI status. Patients completed 3-day voiding diaries and a UI-specific quality-of-life index before and after treatment.
Results: 108 patients (mean age 73 ± 5 years, range 65-86 years) with stress, urge and mixed UI participated. There was concordance between patients' and physicians' ratings of change in 57% of cases. Among the remaining cases, patients were 1.6 times as likely to report significant improvements compared to physicians. Patients' ratings correlated more strongly with improvements in UI episodes in the voiding diary ($r = 0.4$, $P = 0.002$ versus $r = 0.3$, $P = 0.004$ for physicians) and on the quality-of-life index ($r = -0.5$, $P<0.0001$ versus $r = -0.4$, $P<0.0001$ for physicians).
Conclusion: physicians underestimate clinically meaningful changes in UI in older women following behavioural interventions.

Keywords: *urinary incontinence, outcome measures, behavioural interventions, elderly*

Introduction

Urinary incontinence (UI) is arguably one of the most common geriatric symptoms. Despite its high prevalence, its association with adverse health outcomes, and the fact that there are evidence-based treatment options available, many health-care practitioners do not routinely screen for UI [1–3]. Even among those who do screen for and treat UI, successful management is often confounded by the complexity of contributing factors and decisions surrounding therapeutic interventions.

One of the greatest difficulties in UI care is defining when a satisfactory improvement in UI status has been achieved. Outcome measures, such as voiding diaries, pad tests, or quality-of-life questionnaires, are recommended for use by the 3rd International Consultation on Urinary Incontinence [4]. However, due to time constraints, logistic difficulties and unfamiliarity with the tools, these are seldom used by clinicians in routine practice [5]. Even when they are used, there is rarely consensus among the different measures as to the benefits achieved [6]. In most practices, physicians and nurses rely loosely on their clinical judgement to gauge whether satisfactory improvements have been attained, and whether their patients require more aggressive treatment.

A number of studies suggest that clinicians differ from patients in their expectations for UI treatment outcomes [5, 7–9]. In a survey of 100 women with UI, 17% expected a complete cure of all bladder irregularities after treatment [7]. Only 3% of 156 clinicians surveyed perceived complete cure as a realistic goal [5]. Forty-three per cent of the women responded that they would be satisfied with a good improvement that no longer interfered with their quality of life. This was what most incontinence care providers (85%) hoped to achieve as a successful outcome. Overall, there was found to be poor agreement between clinicians' and patients' attitudes towards the acceptability of symptoms after treatment [5]. The majority of clinicians thought that small amounts of leakage were generally acceptable, although this was not the case for patients, with less than a third of them considering this to be a satisfactory residual treatment outcome.

The discrepancy between clinicians' and patients' expectations regarding UI treatment outcomes may explain differences between clinical impressions of success and patient satisfaction following incontinence surgery. Among 112 women aged 33–102 undergoing tension-free vaginal tape surgery for stress or mixed incontinence, only 66% of the women reported being cured, whereas their clinicians gauged an 89% post-surgical cure rate [8]. In a different surgical study for UI treatment, 68% of women said they would recommend the operation to a friend at 1-year follow-up [9]. Satisfaction rates among the surgeons were much higher; 94% said they would treat the women exactly the same way. Taken together, the data from these different studies suggest that patients have higher expectations regarding treatment outcomes and are more frequently disappointed with the results of interventions.

Only one comparison of physician and patient assessments of improvement has been reported following pharmacologic treatment of UI [10]. In a placebo-controlled trial of duloxetine treatment for stress UI in younger and middle-aged women in the 18–65 age group agreement regarding improvement was only moderate, with 42% of ratings being different. As in the surgical studies, when improvement ratings differed, clinicians rated improvement greater than did patients in 54% of cases.

To our knowledge, no study has examined whether a dichotomy exists between clinicians' and patients' impression of UI treatment outcomes in non-surgical populations of older incontinent women. Behavioural management of UI, including lifestyle modification, pelvic floor muscle exercises, and bladder re-training, remains the first-line treatment for urge, stress and mixed UI, the most common UI types seen in older women [11, 12]. The decision to proceed to more aggressive treatment strategies, such as medication or surgery, should be based on clinician and patient dissatisfaction with these conservative measures. A better understanding of the way older women and their clinicians evaluate treatment outcomes is critical to ensure that the patient's goals are met, and that consensus is achieved prior to proceeding to more aggressive treatment options that may entail greater risk.

The objective of this study was to determine to what extent older women's perceptions of improvement in UI status following behavioural management for UI correspond with physicians' global ratings of change. We also compared patients' and physicians' ratings of improvement with more objective UI outcome measures, such as voiding diaries and quality-of-life measures to better understand whence their judgements were derived.

Methods

Subjects

Participants were consecutive new female patients seeking care at six UI outpatient tertiary care referral centres in Montreal and Sherbrooke, Quebec, between September 2005 and June 2007, along with their treating physicians. Women who were 65 years and older and who had symptoms of UI as defined by one or more episodes of involuntary urinary loss during the past 3 months, were eligible. Exclusion criteria included evidence of cognitive impairment indicated by a score of ≤24 on the Mini Mental State Examination [13]; other neurological conditions or severe demyelinating illnesses; terminal cancer; use of a permanent or intermittent urinary catheter; residence in a nursing home; or a history of surgery to treat UI within the past 2 years. Participants were not screened for depression.

Procedure

The study was approved by the Institutional Review Board of the Institut universitaire de gériatrie de Montréal, Quebec, Canada. Patients were recruited from the UI clinic rosters by telephone prior to their initial visit with the UI specialist. A research assistant met with all participants at the time of their first appointment to screen for eligibility and obtain consent. If eligible, baseline socio-demographic data were collected and the International Consultation on Incontinence Questionnaire (ICIQ) [14] measuring UI severity was administered. UI-specific quality of life was recorded with the Incontinence Quality of Life (I-QOL) questionnaire designed for all types of UI [15, 16], a validated 22-item questionnaire where higher scores indicate better quality of life. All participants were instructed on how to keep a 72-h voiding diary to record episodes of leakage. The participants then saw a physician specialised in UI (urologist, gynaecologist or geriatrician) who documented a presumed clinical diagnosis of UI type—either stress, urge, mixed or other. As urodynamic studies were not performed in all patients, we relied on the clinician's diagnosis as the gold standard for classifying UI type.

Treatment was identical for all participants. After the first visit, a clinical nurse specialist instructed the patients on lifestyle modification techniques (e.g. reduction of caffeine intake), distraction strategies and interval training for overcoming urinary urge incontinence, and a 12-week programme of pelvic floor muscle training exercises. The clinical nurse specialist performed a physical examination to verify that the patients knew how to isolate their pelvic floor muscle properly. Each participant received a 26-page instructional booklet describing the exercise protocol, lifestyle modification techniques and distraction strategies. To encourage adherence to the exercise protocol, a research assistant conducted two telephone follow-ups at 4-week intervals. The patients were asked to complete another 72-h voiding diary immediately prior to their 3-month clinic visit with their physician to objectively record if their incontinence episodes had improved.

At the 3-month follow-up visit, the same research assistant met with each patient to re-administer the I-QOL and to determine the Patient's Global Impression of Improvement (PGI-I) in their UI condition subsequent to completing the conservative management protocol. The PGI-I is a validated, single-item global rating of change scale that asks the patient to describe how their UI condition is after treatment compared with how it was before treatment [17]. Seven responses are possible: very much, much, and a little better, no change, and a little, much and very much worse. Afterwards, each patient met with their physician to discuss treatment efficacy, and the clinicians were asked to document their Clinician's Global Impression of Improvement (CGI-I). The CGI-I is a clinician-rated single-item scale that uses the same seven-point response criteria as the PGI-I [10]. Physicians were blinded to the patient's voiding diaries, quality-of-life scores and global impressions of change at follow-up.

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Analysis

Perfect concordance was defined as the exact same rating obtained from both the patient and physician on the PGI-I and CGI-I respectively after completion of the behavioural management protocol. Agreement between clinician and patient global ratings of improvement was also calculated using Cohen's kappa (weighted Fleiss coefficient), which is a more robust measure than the simple percent agreement calculation between two raters as it takes into account the agreement occurring by chance [18]. A kappa coefficient of 1 indicates perfect agreement and -1 indicates perfect disagreement. Degree of associations between 3-month changes in incontinence episode frequency and changes in quality-of-life ratings with the patient and clinician's global ratings of improvement were assessed with Spearman's correlation coefficient (Rho). Three-month changes in voiding frequencies were calculated as the percent change in the mean number of incontinence episodes per day recorded in the baseline compared to the follow-up voiding diary. Three-month changes in quality-of-life ratings were calculated as the difference in scores between baseline and follow-up administration of the I-QOL questionnaire.

Results

Complete data from seven physicians and 108 female patients with stress, urge or mixed UI were available for analysis. Baseline patient characteristics are shown in Table 1. The patient sample was in good health with a mean age of 73 years (range 65–86 years). Mixed UI was the most common UI type. At least half the patients experienced several episodes of UI each day for 5 years or more. The physicians comprised one geriatrician, two gynaecologists, and four urologists. Sufficient patient loads were not available to stratify the data by individual physician or specialty.

Table 1. Participant characteristics

Characteristics	$n = 108$
Age (mean ± SD) (range)	73 ± 5 (65–86)
Language	
French	85%
English	15%
Educational attainment	
<12 years	34%
High school	35%
College	11%
University	21%
Mini Mental score (mean ± SD) (range)	29 ± 1 (25–30)
General health status	
Excellent	13%
Very good	36%
Good	45%
Fair	5%
Poor	1%
ICIQ	
Frequency of UI episodes	
Once a week or less often	17%
2–3 times per week	14%
Once a day	17%
Several times a day	48%
All the time	4%
Amount of urine loss per episode	
A small amount	51%
A moderate amount	34%
A large amount	15%
Duration of UI symptoms	
<1 years	18%
1–5 years	41%
>5 years	40%
Mean number of UI episodes per day in the voiding diary (median, mean ± SD (range))	
Baseline	2.3 ± 2 (0–11)
3-month follow-up	1.0 ± 2 (0–10)
I-QOL total score (mean ± SD) (range)	
Baseline	64 ± 21 (5–100)
3-month follow-up	73 ± 20 (7–100)
UI specialist diagnosis	
Stress	22%
Urge	23%
Mixed	55%

Table 2 shows patient (PGI-I) and clinician ratings (CGI-I) of improvement after 3-months of following the conservative management protocol for UI. Patients and clinicians agreed perfectly in 57% of cases. The weighted kappa coefficient was 0.76. We noted a trend for patients younger than 75 years to concur more frequently with their physicians on the global rating of improvement (63%), compared to patients aged 75 years and older (45%). There was insufficient sample size to conduct significance testing for concordance rating according to patient age group, UI type, UI severity or duration of UI.

In cases where disagreement occurred (43%), patients were 1.6 times more likely to report improvements in UI status (84% of patients said they were very much, much, or a little better, compared to 54% of positive ratings by physicians). This 'optimism' regarding treatment efficacy was

Table 2. Global impression of improvement (crude % agreement)

	Clinician's global impression of improvement (CGI-I)							
Patient's global impression of improvement (PGI-I)	Very much better	Much better	A little better	No change	A little worse	Much worse	Very much worse	Total
Very much better	19	7	1	0	0	0	0	27
Much better	5	7	3	1	0	0	0	16
A little better	1	3	9	15	1	0	0	28
No change	0	1	2	20	1	0	0	23
A little worse	0	1	0	1	2	0	0	4
Much worse	0	0	1	1	0	0	0	2
Very much worse	0	0	0	0	0	0	0	0
Total	25	19	16	36	4	0	0	100%

Table 3. Correlation between patient and clinician's ratings of improvement and changes in UI frequency and quality of life

	Patients' impression (PGI-I)	Clinicians' impression (CGI-I)
Change in voiding diary	$r = 0.4$ $P = 0.002$	$r = 0.3$ $P = 0.004$
Change in quality-of-life index	$r = -0.5$ $P<0.0001$	$r = -0.4$ $P<0.0001$

reported more frequently by patients suffering from stress and mixed UI. Younger patients tended to be even more positive than older patients, with 75% versus 59% having more positive ratings than their physicians. In one-sixth of cases, patients said they had improved significantly, whereas clinicians noted only moderate improvements. In over one-third of discordant cases, clinicians noted no improvement, whereas patients reported a little bit of improvement in their UI condition.

Patients' ratings of improvement correlated better than clinicians' with reductions in UI episodes recorded objectively in the voiding diary, as well as with subjective improvements in quality of life following treatment (Table 3). All correlations were statistically significant, moderate in magnitude, and related to improvement scores (e.g. reductions in UI episodes were associated with lower scores on the improvement scale [1 = very much better] and higher scores on the I-QOL, representing better quality of life and improved status).

Discussion

Findings from this clinical study of older women undergoing conservative management for UI indicate that almost 75% of participants reported some degree of subjective improvement in their UI status following a 3-month trial of lifestyle management, bladder re-training and pelvic floor muscle exercise training. Clinicians concurred with their patients' ratings of improvement in a little over half the cases. When disagreement occurred, patients were 1.6 times likely to report positive effects from the intervention than physicians. In comparison with more objective UI outcome measures, patients' global impressions of improvement correlated better than clinicians' with reductions in incontinence episode frequencies recorded in voiding diaries and with improvements in quality-of-life scores.

Our data regarding behavioural management of UI in older women confirms high treatment efficacy rates, based on subjective ratings and improvements in the voiding diaries and I-QOL scores (Table 1), even in this significantly older sample of patients [19, 20]. We also reproduced the moderate concordance rates and correlations previously observed between global ratings of change and more objective outcome measures [10, 21]. Our results differ from previous work with regard to patients' propensity to rate the results of their intervention more favourably than their physicians.

One explanation for why patients rated their improvements in UI more favourably than their physicians may be the nature of the intervention. The behavioural management protocol in our study required patients to make dietary changes, such as eliminating caffeinated beverages, performing daily pelvic floor muscle exercises, and employing distraction techniques to prolong voiding intervals. These interventions require strong patient motivation and involvement. As opposed to pharmacologic and surgical interventions, patients are more involved in behavioural therapies and may perceive deriving a greater benefit. Alternatively, we thought our results might reflect the influence of age, as older adults tend to rate their health conditions less negatively with increasing age [22–24]. However, this hypothesis did not hold true in our study. Patients under 75 years of age were equally or more positive about their treatment effects than those aged 75 years and older.

Approximately a dozen patients with urge UI were unsatisfied with the behavioural management protocol and were permitted to initiate bladder relaxant medication towards the end of the study. These patients were still included in the analysis since the primary objective of our study was to evaluate the concordance between patients' and physicians' ratings of change, rather than patients' response to behavioural therapy *per se*. Similarly, not all patients adhered completely to the protocol. Non-adherent patients were also not excluded from analysis as our goal was to examine their degree of agreement with their physician, even if there was no change in status.

In conclusion, our study suggests that health-care professionals treating older adults with UI should delve more diligently into patients' perceptions of their treatment results, so consensus can be obtained prior to proceeding to more aggressive management options.

Key points

- Three quarters of older incontinent women undergoing behavioural management for UI report benefit from this therapeutic approach.
- Clinicians concur with their older patients' ratings of improvement following conservative management of UI in only half the cases.
- When disagreement occurs, older patients are more likely to rate their improvements favourably compared to clinicians.
- Patients' ratings of improvement in UI correlate better than clinicians' with reductions in incontinence episode frequencies recorded in voiding diaries and with improvements in quality-of-life scores.
- Consensual satisfaction with UI status should be obtained prior to proceeding to more aggressive treatment strategies, such as medication and surgery for UI, as these entail greater risks for older adults.

Conflicts of interests

None

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