

Help seeking for incontinence by heart failure patients

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Abstract (275 words)

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Objectives: To identify patient factors associated with help-seeking for urinary incontinence (UI) in heart failure (HF) patients.

Design: Secondary analysis of cross-sectional data collected between 2005 and 2007

Setting: 22 bed hospital unit and 2 out-patient clinics for HF

Participants: Two hundred ninety six men and women 20 years or older with HF diagnosis signed informed consent and participated in the original 81-item survey.

Measurements: UI help-seeking was defined as an affirmative response to a single item on reporting UI to a doctor or nurse. Incontinence Impact Questionnaire-7 (IIQ-7) and the Urogenital Distress Inventory-6 (UDI-6) were used to assess level of impact of UI on quality of life.

Results: 134 (45%) participants (median age 62 years; 45.5% male) had UI, 60 (44.8%) had at least two other urinary symptoms, and 45 (34%) reported UI. Bivariate analyses revealed that IIQ-7, UDI-6, presence of other urinary symptoms, interaction between sex and age were significantly associated with help-seeking at $p < .05$ level. Logistic regression showed UDI-6 ($p = .0036$), sex ($p = .0179$), and sex and age interaction term ($p = .0265$) remained significantly associated with help-seeking.

Conclusion: Overall help-seeking for UI was low. Greater distress from UI (UDI-6) and being male under 50 years were significant correlates of UI help-seeking. Given prevalence of UI and other urinary symptoms in this population and the burden of HF symptom management, all HF patients should be screened for UI and provided interventions to improve or manage it.

Introduction

Urinary incontinence (UI) and heart failure (HF) are both prevalent conditions that have significant impact on quality of life (1). In one study of 167,854 Medicare patients, comorbid HF and UI was reported in 32% of men and 41% of women (2) yet little information is available about HF patients seeking help for urinary incontinence despite evidence that both conditions can be managed through intervention from a health care worker (1).

In other patient groups, a small proportion report UI to a health care professional (3)(4). The impact of incontinence has been explored and associated with help-seeking behavior. Howard and Steggall noted that the prevalence and severity of UI increase with age, yet the impact was greater for younger women (5). Similarly, Li et al found a higher prevalence in women, but fewer women than men sought help for UI (3). Other researchers have reported that black women experience greater impact from moderate UI than white women as measured by the Incontinence Impact Questionnaire (IIQ) (6). Huang et al found increasing IIQ score was an independent predictor of help-seeking for UI (4).

Patients with depression and/or fatigue may lack the energy or motivation needed to seek help from healthcare providers for chronic conditions. Depression has been reported to be associated with both UI (4) and HF (7). There is evidence that older heart failure patients sometimes delay seeking help for worsening symptoms of heart failure, such as dyspnea and fatigue (8,9). Thus it may be that heart failure patients do not seek help for UI. The purpose of this study was to identify factors associated with help-seeking for UI in heart failure patients and address the following questions.

1. Are age, gender, race, and general health associated with help-seeking behavior in incontinent heart failure patients?

2. Are urinary symptoms (e.g., frequency, nocturia, urgency) and urinary incontinence impact associated with help-seeking for incontinence?

3. Is the relationship between factors associated with help-seeking for urinary incontinence mediated by depression or fatigue?

Methods

Overview

Secondary analyses were conducted using a dataset from a survey to explore prevalence and correlates of urinary incontinence and other urinary symptoms conducted with HF patients from 2005 to 2007 (10). Participants were recruited from one in-patient HF unit and two ambulatory HF clinics. The study was approved by the UNC, Presbyterian and Carolina Health Systems IRBs.

Measures

The Incontinence Impact Questionnaire (IIQ) is a 30-question survey used to evaluate the impact of incontinence on quality of life, particularly in the areas of physical activity, travel, social/relationships, and emotional health (11). Similarly, the Urinary Distress Inventory (UDI) is a 19-question survey that assesses bother experienced from symptoms, including irritative symptoms, obstructive/discomfort, and stress symptoms. Both surveys have been adapted to short forms, the 7-item IIQ-7 and 6-item UDI-6, respectively (12). Each item in the IIQ and UDI has four possible responses: 0 for not at all, 1 for slightly, 2 for moderately and 3 for greatly. Therefore, scores can range from 0 to 21 for the IIQ-7 and 0 to 18 for the UDI-6. These short forms have been validated and shown to correlate strongly with the long form versions, and also reduce burden for respondents (13). Higher IIQ scores suggest greater impact on quality of life,

and higher UDI scores suggest greater distress experienced by the patient in response to urinary symptoms.

The Iowa Fatigue Scale (IFS) is an 11-item survey used to screen primary care patients for fatigue (14). The scale has four subscales, including cognitive, energy, fatigue, and productivity. Each question is scored 1 to 5, with possible responses including not at all, a little, moderately, quite a bit, and extremely. Therefore, possible scores can range from 11 to 55, with higher scores suggesting more severe fatigue. One item used to evaluate productivity, “I have low output,” was associated with respondent confusion during data collection in the parent study, and was therefore, not included in this survey (10).

The Center for Epidemiologic Studies Depression Scale (CES-D) is a 20-item scale used to screen for major depression. It has been shown to be particularly useful in older adults (15). The scale has been adapted to a short form version (CESD-SF), which is a 10 item survey (16). Possible responses include rarely or none of the time, some of the time, occasionally or a moderate amount, or all of the time. Scores can range from 0 to 30, with higher scores indicating more depressive symptoms. A score of 10 or greater on the short form suggests probable depression. In validation studies, the short form had good predictive accuracy of the full length survey and reduced patient burden.

Outcome variable

Survey participants responded to an item stating, “Have you reported your urinary leakage or overactive bladder to your doctor or nurse?” An affirmative response was used as the definition for help-seeking behavior for these analyses.

Statistical Analyses

Descriptive statistics were used to characterize the sample. Bivariate analysis was then used to examine the association between each variable with help-seeking behavior. Categorical variables were tested with Mantel-Haenszel Chi-square while continuous variables were tested using t-test. These variables included age, sex, race, HF stage, self-reported general health status, UDI-6 score, IIQ-7 score, and other urinary symptoms (i.e., frequency, nocturia, urgency). Age was dichotomized into two groups: greater than or equal to 50 years old or less than 50 years old. Because of so few responses to race groups other than white or African American, race was collapsed into white and non-white groups. General health was classified as good or poor health. Heart failure stage was collapsed into early heart failure for stages I and II, and late heart failure for stages III and IV, based on New York Heart Association Classification (NYHA). Because depression and fatigue are highly correlated, a composite variable was created using scores from CESD-SF and IFS. The possible categories for the composite score were “neither is severe”, “one is severe” or “both are severe.” Variables found to have a significant association at the bivariate level were then carried into the multivariate model, which was tested using logistic regression.

Results

Sample Characteristics

Characteristics of the sample (N=296) are shown in Table 1. The majority were men (60.5%), white (67.9%), married (55.7%), and attending an outpatient clinic (65.4%). Average age was 62.2 years old (SD=14.7, median=62, range from 20 to 94). Approximately 62.4% of respondents rated their health status as poor. Approximately 69% (68.9%) reported having two or less urinary symptoms, other than incontinence. Based on the NYHA Heart Failure stage, 50.3% were rated in late stage (Class III & IV). The average scores of CES-D and fatigue for the

overall sample were 10.29 (SD=6.3) and 29.10 (SD=6.85), respectively. Severe depression or severe fatigue was present in 30.7% of the sample.

One hundred and thirty-four patients (45.27%) in this sample reported UI. Proportionally more women ($p<.0001$), out-patients ($p<.0001$), people who self-reported poor health ($p=.0028$) and people reporting more than two urinary symptoms also reported being incontinent ($p<.0001$). People having UI had significantly higher depression and fatigue scores than people without UI (12.12 vs. 8.78, $p<.0001$; 31.20 vs. 27.36, $p<.0001$). No statistically significant differences were found between incontinent and continent patients by age, race, marital status and heart failure stage.

Bivariate Analysis for help-seeking

Of the 134 incontinent heart failure patients, only 45 (34%) reported UI to a health care professional. There were no differences in help-seeking by sex, race, general health status, or heart failure stage.

Having more than two urinary symptoms, other than incontinence (i.e., frequency, urgency or nocturia) was associated with help-seeking behavior (chi-square (1, N=134) = 4.76, $p=.03$). People who sought help also had significantly higher UDI-6 and IIQ-7 scores ($t(127)=-3.11$, $p=.0023$; $t(127)=-2.48$, $p=.0143$).

Although 79 incontinent respondents (58.95%) had either severe depression or severe fatigue or both, there were no significant differences in help-seeking by depression-fatigue composite score (chi-square (1, N=134) = 0.90, $p = .34$), see table 2.

Twenty-two percent of the incontinent respondents reported that they had talked to other people about incontinence, 13% reported that they had asked for more information about incontinence, and 30% had read articles in popular magazines. Each of these variables was

significantly associated with help seeking (chi-square (1, N=134) = 18.3, $p < .0001$; chi-square (1, N=134) = 20.1, $p < .0001$; chi-square (1, N=134) = 5.3, $p = .0217$ respectively). Respondents were also asked if they would be interested in learning more about urinary leakage; the majority (69%) responded affirmatively. There were no significant differences in reporting UI to a health care professional and having an interest in learning more about UI, see Table 2.

Multivariate Analyses

Logistic regression analysis was used for multivariate analyses. Because of high correlation between the UDI-6 and IIQ-7 ($r = .62$, $p < .0001$), only UDI-6 was entered into the logistic regression model. Age was included in the model because UI prevalence generally increases with age. UDI-6 remained significant: one unit increase of UDI-6 was associated with 17% increase of the likelihood of seeking help ($b = .1715$, $se = .0590$, $p = .0036$); Odds Ratio (OR) 1.187 (95% CI 1.057 to 1.333). There was significant interaction between age and gender on help seeking behavior ($p = .0265$), see Table 3. Men 50 years old or younger were more likely to seek help for incontinence than women. After the age of 50, the proportion of men and women seeking help was similar (31% versus 36%).

Discussion

Secondary analyses were conducted to determine factors that affect help-seeking behavior for incontinence in heart failure patients. Although 45% of the heart failure patients surveyed reported having incontinence, only 34% of those reported it to a doctor or nurse. Despite the low proportion of patients reporting UI, many engaged in behaviors to get information about UI and 69% reported that they would like to learn more about UI. These responses indicate that heart failure patients have interest in knowing more about UI; perhaps to decrease the impact of UI on their lives.

Our findings also indicated that UI may be more bothersome to younger men than younger women. Older men had a similar rate as older women in seeking help. It may be that with age people learn to adjust to being incontinent or consider it a part of growing older. This is an area for further research. A small number of women (N=11) and men (N=9) were under the age of 50 years old; therefore, caution should be used in interpreting these findings. Research with a large number of HF patients under the age of 50 is needed to better understanding help-seeking and reasons for the distress incontinence causes them.

Other researchers found a similar relationship between age and sex and help-seeking (3). It has been suggested that younger women may be less likely to seek help due to the availability of coping strategies, such as pads for bladder control and menstruation. Convenient methods to manage UI may be less available or acceptable to younger men, which in turn, may promote early help-seeking from health care providers. Similarly, women may be more likely to view UI as a personal problem and less likely to seek help, while men may fear that a medical problem underlies UI and seek medical attention (3). Evidence is available suggesting that young women (from 45 to 54 years old) would seek help if they believed UI was related to a health condition (17). Additionally, it may be a common belief that UI is a normal part of the aging process (5). In this case, both health care professionals and patients alike may be unlikely to discuss the problem.

UDI-6 and IIQ-7 scores were associated with help-seeking. This finding suggests that bothersomeness and impact on quality of life may be important factors in the decision to seek help. Since patient characteristics like race or sex could be unlikely to identify incontinent HF patients, it is important for health care professionals to ask all HF patients about urinary symptoms.

About half (49.3%) of incontinent HF patients had either severe depression or severe fatigue or both. While the composite variable for depression/fatigue was not found to mediate the relationship between patient characteristics and help-seeking for UI, this significant health issue needs to be addressed during hospitalizations and clinic visits.

There were several limitations to this study. First, responses were collected by self-report in an earlier study, and therefore the accuracy of responses could not be verified nor could additional information be gleaned from the respondents. Additionally, information about the respondents' attitudes and beliefs about UI was not collected. Therefore, more research is needed to gain a better understanding of the factors that act as barriers to HF patients seeking help for UI.

Conclusion

UI is prevalent in heart failure patients, but few patients seek help for it. UI can have varying impact on HF patients. Therefore, screening for urinary incontinence and its impact on quality of life at hospital admission and at clinical visits, especially for younger and male HF patients could begin the processes of improving continence and better management of urinary symptoms.

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Graphics

Table 1 Characteristics of the Sample (N=296)

Variables	Overall Mean (SD)/ No. (%)	Incontinent (N=134) Mean (SD)/ No. (%)	Not incontinent (N=162) Mean (SD)/ No. (%)	p-value
Age	62.17(14.7) 62.00*	63.28(15.2) 64.00*	61.25(14.2) 61.00*	0.2365
Gender				
Male	179 (60.5)	61 (45.5)	118 (72.8)	<0.0001
Female	117 (39.5)	73 (54.5)	44 (27.2)	
Race				
White	201 (67.9)	92 (68.7)	109 (67.3)	0.8015
Non-White	95 (32.1)	42 (31.3)	53 (32.7)	
Marital Status				
Married	165 (55.7)	72 (53.7)	93 (57.4)	0.5269
Other	131 (44.3)	62 (46.3)	69 (42.6)	
Location				
Inpatient	102 (34.6)	29(21.8)	73 (45.1)	<0.0001
Outpatient	193 (65.4)	104 (78.2)	89 (54.9)	
NYHA HF stage				
Class I&II	147 (49.7)	60 (44.8)	87 (53.7)	0.1269
Class III&IV	149 (50.3)	74 (55.2)	75 (56.3)	
Self-reported health				
Good	112 (37.8)	38 (28.4)	74 (45.7)	0.0023
Poor	184 (62.2)	96 (71.6)	88 (54.3)	
Urinary Symptoms				
Frequency	174 (59.2)	98 (56.3)	76 (43.7)	<0.0001
Nocturia	188 (63.7)	94 (50.0)	94 (50.0)	0.0248
Urgency	83 (28.1)	80 (96.4)	3 (3.6)	<0.0001
Urinary Symptoms				
Less or equal to 2 symptoms	204 (68.9)	74(55.2)	130 (80.3)	<0.0001
Greater than 2 symptoms	92 (31.1)	60(44.8)	32 (19.7)	
CES-D Score	10.29 (6.3)	12.12 (6.5)	8.78 (5.7)	<0.0001
Fatigue Score	29.10(6.85)	31.20 (6.4)	27.36 (6.7)	<0.0001
Composite of Depression and Fatigue				

Neither is severe	150(50.7)	51(38.1)	99(61.1)	<0.0001
One is severe	91(30.7)	46(34.3)	45(27.8)	
Both are severe	55(18.6)	37(27.6)	18(11.1)	

*Median

Table 2 Bivariate Analysis of UI Help-Seeking Behavior for Patients with UI (N=134)*

Variables	Help-Seeking (N=45) Mean (SD)/ No. (%)	No Help-Seeking (N=85) Mean (SD)/ No. (%)	Statistical Test	Critical Value	<i>p</i> -Value
Gender					
Male	21 (47.73)	36 (42.35)	Chi-square	0.3369	0.5616
Female	23 (52.27)	49 (57.65)			
Self-reported health					
Good	10 (22.73)	26 (30.59)	Chi-square	0.8836	0.3472
Poor	34 (77.27)	59 (69.41)			
Talking to others about UI					
Yes	20 (45.45)	10 (11.76)	Chi-square	18.2946	<0.0001
No	24 (54.55)	75 (88.24)			
Reading articles about UI					
Yes	19 (43.18)	20 (23.53)	Chi-square	5.2675	0.0217
No	25 (56.82)	65 (76.47)			
Asking for more information about UI					
Yes	14 (31.82)	3 (3.53)	Chi-square	20.1207	<0.0001
No	30 (68.18)	82 (96.47)			
Interesting in learning about UI					
Yes	33 (75.00)	57 (67.06)	Chi-square	0.8601	0.3537
No	11 (25.00)	28 (32.94)			
Urinary Symptoms					
Less than or equal to 2 symptoms	18 (40.91)	52 (61.18)	Chi-square	4.7613	0.0291
Greater than 2 symptoms	26 (59.09)	33 (38.82)			
Composite of Depression and Fatigue					
Neither is severe	16 (36.36)	34 (40.00)	Chi-square	0.8985	0.3432
One is severe	13 (29.55)	31 (36.47)			
Both are severe	15 (34.09)	20 (23.53)			

*5 missing values

Figure 1 Help Seeking by Gender and Age Groups

