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Occult urinary incontinence in elderly women and its association with geriatric condition

K. SILAY[1], S. AKINCI[2], A. ULAS[3], A. YALCIN[1], Y.S. SILAY[4], M.B. AKINCI[3], I. DILEK[2], B. YALCIN[3]

[1]Department of Internal Medicine and Geriatrics, Yildirim Beyazit University, Ataturk Research and Training Hospital, Ankara, Turkey
[2]Department of Hematology, Yildirim Beyazit University, Ataturk Research and Training Hospital, Ankara, Turkey
[3]Department of Medical Oncology, Yildirim Beyazit University, Ataturk Research and Training Hospital, Ankara, Turkey
[4]Department of Market Access and Health Policy, Association of Research-Based Pharmaceutical Companies, Ankara, Turkey

Abstract. – OBJECTIVE: Many older women are hesitated to initiate discussions about urinary symptoms and their incontinence. The aim of this study is to determine the prevalence of occult urinary incontinence in outpatient older women and to evaluate its association with other geriatric conditions.

PATIENTS AND METHODS: 100 female patients 65 years and older were assessed at the geriatric outpatient clinic. The validated form of the Turkish version of the International Consultation on Incontinence Questionnaire-Short Form was used to evaluate urinary incontinence and quality of life. Comprehensive geriatric assessment including activities of daily living, instrumental activities of daily living, mini mental state examination and geriatrics depression scale was performed. The number of falls, comorbid conditions and number of medications were noted. The association between urinary incontinence and geriatric domains were evaluated with logistic regression analysis.

RESULTS: A total of 100 patients were evaluated, 64 of them included in the study. The median age of patients was 72.5. The rate of urinary incontinence was found 40.6%. The association between urinary incontinence and quality of life, performance status and comorbidity was found statistically significant with logistic regression ($p = 0.033$, $p = 0.005$, $p = 0.031$ respectively). Half of the patients with UI believe that it is part of normal aging and no definite treatment is available.

CONCLUSIONS: Occult urinary incontinence is a significant problem in older women that inversely affecting the quality of life. The study suggests that awareness and education regarding incontinence should be increased among elderly patients and screening of urinary incontinence is an important part of the geriatric assessment. The evaluation and management of functional status and comorbid conditions should be the initial step during incontinence management in elderly patients.

Key Words:
Urinary incontinence, Elderly, Geriatric assessment, Quality of life.

Introduction

Urinary incontinence (UI) is the involuntary loss of urine, in the absence of urinary tract infection. The International Continence Society defines urinary incontinence as "involuntary loss of urine that is a social or hygienic problem"[1]. Urinary incontinence impacts the lives of older individuals and it is considered one of the most important and recurrent geriatric syndromes[2-5]. There are four major types of urinary incontinence associated with lower urinary tract dysfunction: urgency incontinence, stress incontinence, mixed incontinence, and incontinence due to incomplete bladder emptying.

Urinary incontinence increases by age due to functional and structural changes occurring in the urinary system and with impaired functional independence. It is estimated that approximately 15% of community-dwelling elderly individuals and 50% of institutionalised elderly persons have significant urinary incontinence[6].

In older women, the prevalence of urinary incontinence is 17 to 55 percent and in younger and middle-aged women it is 12 to 42 percent. In general, the prevalence of urinary incontinence

Corresponding Author: Kamile Silay, MD; e-mail: kamilesilay@hotmail.com

in men is approximately half that in women[6,7]. The prevalence of urinary incontinence is 2 to 11 percent in men older than 65 years[8,9].

Stress incontinence is the primary type of urinary incontinence reported among younger women[10]. Urge incontinence becomes more prevalent with age, with urge and mixed incontinence explaining the majority of urinary incontinence in older women[9]. Some of the complications of UI include sexual dysfunction, stress, major depression and diminished quality of life[11-14]. Quality of life was found to significantly decrease with increasing urinary incontinence severity[15].

Many patients are hesitated to initiate discussions about urinary symptoms and their incontinence. In a survey, only 45 percent of women who reported urinary incontinence occurring at least once a week sought care for their incontinence symptoms in United States[16]. This leaves incontinent patients with unresolved physical, functional, and psychological morbidity, and diminished quality of life[17]. Since urinary incontinence can be a difficult topic for patients to discuss, screening and an empathic approach are important aspects of care.

The purpose of this study is to determine the prevalence of occult urinary incontinence in older women and to evaluate its association with other geriatric conditions. The underlying reasons of not seeking medical help among patients with urinary incontinence were also assessed.

Patients and Methods

100 female patients age 65 years and older were evaluated in geriatric outpatient clinic. The validated form of the Turkish version of the International Consultation on Incontinence Questionnaire-Short Form (ICIQ-SF) was used to evaluate urinary incontinence and quality of life. ICIQ-SF is composed of six questions, which evaluate the frequency and severity of urinary loss and how much UI interferes in daily life. Patients who have urinary incontinence were questioned about the reasons of "not seeking medical help" in the past.

Functional status assessed by activities of daily living (ADL) that represents the ability of the patient to take care of himself or herself, and instrumental activities of daily living (IADL) that assess the ability of the patient to live independently in the community; cognitive status assessed using the Mini Mental State Examination (MMSE) and mood assessed by geriatrics depression scale (GDS). Patients with MMSE score 29 to 21 (cognitive impairment and mild dementia) were included in the study. GDS score equal to 5 and more is suggestive of depression. The comorbid medical conditions, the number of medications, the number of falls and body mass index (BMI) of patients were noted. Polypharmacy defined as the use of 4 or more medications by patients. High comorbidity defined as having 5 or more comorbid condition. Demographic and medical data were obtained from patient`s medical records.

Statistical Analysis

Baseline demographics and geriatric assessments were summarized using descriptive statistics. The association between urinary incontinence and depression, quality of life, functional status, cognitive function, high comorbidity, polypharmacy, obesity and the number of falls were evaluated with logistic regression analysis. $p < 0.05$ was considered statistically significant.

Results

A total of 100 patients were evaluated, 64 of them were included in the study. Patients with active urinary tract infections, severe dementia, history of stroke and neurologic disease, prior pelvic surgery and radiation were excluded from the study. The median age of patients was 72.5. Patients were divided according to their age in two groups to those between 65 and 74 years 60.9% (n = 39) and those older than 75 years 39.1% (n = 25). While the rate of urinary incontinence was found 40.6% (n = 26), the quality of life was affected by 28.1% among the patients.

The association between urinary incontinence and quality of life, performance status and comorbidity was found statistically significant with logistic regression ($p = 0.033$, $p = 0.005$ and $p = 0.031$ respectively). No association was found with depression ($p = 0.486$). Also there was not any association between urinary incontinence and age, obesity, cognitive impairment and mild dementia, polypharmacy, history of diabetes and falls. (Table I: Association between urinary incontinence and geriatric assessment domains) Depression was found associated with dementia ($p = 0.016$).

When patients were questioned regarding their understanding of urinary incontinence and the

Table I. Logistic regression; association of urinary incontinence with geriatric assessment domains.

	B	S.E.	Wald	df	p	Odds ratio	95% CI for odds ratio	
							Lower	Upper
Age	.15	.89	027	1	.868	1.7	019	6.75
ADL	6.67	2.38	7.85	1	.005	788.9	7.41	83884.5
IADL	-1.95	1.63	1.42	1	.232	.14	.006	3.49
MCI/dementia	-.86	1.13	.59	1	.444	.42	.05	3.83
GDS	-.65	.94	.49	1	.486	.51	.08	3.29
Polypharmacy	-.50	1.21	.17	1	.680	.60	.06	6.51
Comorbidity	2.63	1.22	4.65	1	.031	13.9	1.27	153.9
Obesity	.17	.88	.03	1	.845	1.19	.21.	6.68
DM	.54	1.06	26	1	.613	1.71	.21	13.9
FALL	-.08	.86	.01	1	.920	.91	.17	4.91
QOL	2.10	.99	4.55	1	.033	8.19	1.18	56.6
Constant	-1.97	.96	4.23	1	.040	.14		

ADL: activities of daily living; IADL: instrumental activities of daily living; MCI: Minimal Cognitive Impairment; GDS: Geriatric Depression Scale; DM: Diabetes mellitus QOL: Quality of Life.

reason of not seeking medical help in the past; 50% (n = 13) of patients answered that it is part of normal aging and no definite treatment is available, 34.6% (n = 9) of them is embarrassed to talk about it and 15.3% (n = 4) said they did not know that urinary incontinence can be evaluated in medicine clinic.

Discussion

In this study the occult urinary incontinence rate has been shown 40.6% in older women. Many patients are reluctant to initiate discussions about their incontinence which leaves them with unresolved physical, functional, and psychological morbidity and diminished quality of life[17]. Our findings reveal that if urinary incontinence is not specifically addressed in geriatric population it might be easily overlooked. A recent study suggests that more research is needed on whether UI is under diagnosed and undertreated, including reasons for why it is occurring[18]. In our study majority of patients with UI think that incontinence is natural course of aging and no definite treatment is available. 34.6% of patients are embarrassed about to bring up the subject. Therefore physicians should be encouraged inquiring the older patients about urinary incontinence. Also the awareness and education regarding UI as a disease needs to be increased to avoid under diagnosis and lack of treatment in elderly population.

Most researchers concur that a patient's psychosocial health is an important aspect of the severity of UI[19]. Quality of life was found to significantly decrease with increasing urinary incontinence severity[15]. Our finding support that there is a significant association with UI and diminished quality of life. 28.1% of patients with UI stated that their quality of life was affected by incontinence.

However, no association was found between UI and depression in our study. Even though the quality of life was affected by incontinence no associated depression was seen. In one study no significant association was seen between UI and depression in multiethnic older women and more research is advised to further elucidate the mechanisms linking depressive symptoms and UI[18]. On the other hand younger women between the ages of 18-44 living with UI are at a threefold risk of being diagnosed with major depression in comparison with women over the age of 45 in another study[14]. These findings suggest that younger females might be affected emotionally with incontinence more than elders.

The association between dementia and depression is found significant in elderly patient[20]. This shows the importance of comprehensive geriatric assessment while evaluating and addressing different problems in older patient effectively.

The functional dependency rate was found significantly higher in patients with urinary incontinence than those without UI. Functional disability is common in older adults. It is associated with a high risk of subsequent health decline. Studies have documented that as the degree of functional dependence increases, the prevalence of incontinence increases as well[21].

Another important finding is the significant association with UI and comorbid conditions. Chronic obstructive lung disease, congestive heart failure, diabetes, obesity, connective tissue disorders and cancer of pelvic organs are among the comorbid conditions that are associated with urinary incontinence. The association between diabetes and UI was found insignificant in our study which supports a previous study[22]. No association was found with polypharmacy, number of falls and obesity. This data suggest that comorbid conditions and functional impairment should be evaluated carefully and corrected during the initial management of elderly patients with UI.

Despite being a single center study, this study provides valuable contribution to the literature since a considerable number of patients were systematically evaluated with comprehensive geriatric assessment and analysis evaluating the association between UI and geriatric problems such as depression, dementia, functional status, falls, comorbidities and polypharmacy have been performed.

Conclusions

Our results suggest that occult urinary incontinence is a significant problem in elderly women patient inversely affecting the quality of life. This study suggests that awareness and education regarding incontinence should be increased among older patients and screening of UI is an important part of geriatric assessment. The evaluation and management of functional status and comorbid conditions should be the initial step during incontinence management in elderly patients. No association with depression and incontinence was found; therefore, our proposal is this association should be evaluated with a well controlled, multicenter, larger sample size study in the near future.

Conflict of Interest

The Authors declare that there are no conflicts of interest.

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