

Frequency and Sociodemographic Characteristics of Urinary Incontinence in Patients Over 65 Years of Age in Rural of Turkey

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Original Research / Orijinal Araştırma

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ABSTRACT

Aim: The aim of this study was to determine the prevalence of urinary incontinence in patients over 65 years of age and to investigate its relationship with sociodemographic characteristics.

Methods: This study is a cross-sectional descriptive study performed using a face to face survey and conducted between the dates of May 1st, 2019 and August 1st, 2019 in patients aged 65 and above and who applied to Gemerek State Hospital Family Medicine Outpatient Clinics. Following a literature search, the questionnaire developed by the investigators was applied.

Results: The prevalence of UI was 28.5%. Among those, 43.8% alone had not presented to any physician with this complaint. Among the patients with UI who refrained to tell this complaint to their physicians, 76% considered this condition as a natural consequence of ageing, 17.4% were shy to get examined and 6.6% told that they had no discomfort to have a UI. Among the patients, 72.9% (n=269) were never asked by a physician or a nurse whether they had experienced UI.

Conclusions: The symptoms of urinary incontinence are generally considered as a reflection of ageing or patients are shy to express this complaint. In addition, the rate of questioning about urinary incontinence by the physicians or nurses seems to be very low.

Keywords: geriatrics, urinary incontinence, aging

Türkiye Kırsalında 65 Yaş Üstü Hastaların Üriner İnkontinans Sıklığı ve Sosyodemografik Özelliklerinin Değerlendirilmesi

ÖZ

Amaç: Bu çalışmada amacımız 65 yaş üzerindeki erkek ve kadın hastalarda üriner inkontinans prevalansını belirlemek ve sosyodemografik özelliklerle ilişkisini incelemektir.

Yöntem: Bu çalışma, 1 Mayıs 2019 ile 1 Ağustos 2019 tarihleri arasında Gemerek Devlet Hastanesi Aile Hekimliği Polikliniklerine başvuran 65 yaş ve üzeri hastalarda yüz yüze görüşme yöntemi ile yapılan kesitsel tanımlayıcı bir çalışmadır. Literatür taraması yapıldıktan sonra araştırmacılar tarafından oluşturulan anket uygulanmıştır.

Bulgular: Üriner inkontinans sıklığı %28,5'dir. Üriner inkontinansı olan hastaların %43,8'i üriner inkontinans şikayetini herhangi bir doktora söylememiştir. Üriner inkontinans olup doktora söylemeyenlerin %76'sı idrar kaçırmayı yaşlanmanın doğal bir sonucu olarak görmekte, %17,4'ü muayene olmaktan çekinmekte, %6,6'sı da idrar kaçırmaktan rahatsızlık duymadığını söylemektedir. Hastalarının %72,9'una (n=269) herhangi bir doktor veya hemşire tarafından idrar kaçırmaları olup olmadığı hiç sorulmamıştır.

Sonuç: Hastalar tarafından bu üriner inkontinans semptomları yaşlanmanın normal bir hali olarak değerlendirilmekte veya şikayetlerini söylemekten çekinmektedirler. Doktor veya hemşireler tarafından üriner inkontinans sorgulanma oranının çok düşük olduğu görülmektedir.

Anahtar kelimeler: geriatri, üriner inkontinans, yaşlanma

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Introduction

International Continence Society (ICS) defines urinary incontinence (UI) as a complaint of involuntary incontinence (1). Prevalence of UI varies between 25-45% in the studies and it is a serious health problem worldwide with an annual cost exceeding approximately 26 billion dollars in United States of America (1).

Various UI risk factors have been identified by the ICS and the most commonly seen are age, obesity, number of births, pregnancy, menopausal replacement therapy, ethnicity and race, history of hysterectomy, diet, socioeconomic status, cigarette smoking, physical activity and patient comorbidities (2).

Urinary incontinence is associated with poor quality of life and often starts in middle age (3). Although these symptoms are not a normal part of aging, tendency for UI increases with age (4). With aging, bladder contractility, capacity and ability to delay voiding are reduced and functional urethral pressure decreases. In women, also with the decrease in estrogen, urethral resistance decreases due to vaginal atrophy and weakened periurethral and pelvic muscles. However, urethral length and closing pressure and striated sphincter muscle cells decrease (5). The prostate enlarges in most men. In men, urethral resistance increases, urinary flow rate slows down and tendency to urinary retention occurs with prostate enlargement (6). Elderly patients may experience increased frequency of voiding, nocturia and urgency in addition to UI. All of these point to the changes in the control mechanisms of the central nervous system on the lower urinary tract due to ageing (6). UI is more common in women than in men. Prevalence of stress and mix type UI is high, while urge UI is less common in women. Stress-type UI is rare in men in the absence of a history of trauma, neurological and prostatic disease. The prevalence of UI increases with age in men and this increase is a more steady one compared to women (7).

There is a limited number of studies performed in our country on the prevalence of UI in women; the corresponding number in men is even lesser (8). The aim of this study was to determine the prevalence of

UI in male and female patients over 65 years of age and who applied to the Family Medicine Outpatient Clinic of Gemerek State Hospital and to investigate its relationship with sociodemographic characteristics of the patients.

Methods

This study is a cross-sectional descriptive study performed using a face to face survey. The population of our study is 438 patients aged 65 and over who applied to Gemerek State Hospital Family Medicine Outpatient Clinics between 01 May 2019-01 August 2019. Following a literature search, the survey which was developed by the investigators was applied. The questionnaire is composed of 24 questions which aims to measure the sociodemographic characteristics (age, gender, marital status, place of residence, occupation, level of income, living environment), presence of chronic diseases and medications used, whether there is a complaint of UI and related factors, knowledge and attitudes about UI. As a result of the calculations based on the studies performed in the literature, the sufficient number of sampling was found to be 369 with a $\beta=80$ power and an $\alpha=0.05$ error margin and a $d=0.18$ effect size (GPower program version 3.1 was used) (7). All patients aged 65 years and above were randomly selected and included in the study. Patients who were clinically demented to be unable to respond to a face-to-face questionnaire and patients who refused to participate in the study were excluded. The study was approved by Cumhuriyet University Non-Interventional Clinical Research Ethics Committee with the decision numbered 2019-04/20.

Statistical analysis was performed using SPSS version 21.0 software. Descriptive data were expressed as number, percentage, mean and standard deviation. Frequency distributions for the categorical variables were provided. Chi-square test was used for intergroup comparisons and Student's t-test was used to compare the measurements of two different groups for a given variable. UI was taken as the dependent variable and the relationship between the independent variables was evaluated by multiple regression analysis. A p value of <0.05 was considered

statistically significant.

Results

Four hundred and thirty eight patients were reached and offered to participate in the study. In this study 369 individuals with a mean age of 72.28 ± 6.72 years (range: 65 - 96) participated. Participating in the study and answering the questionnaire rate was 84.24%. Sociodemographic characteristics are shown in Table 1.

Table 1. Sociodemographic characteristics of participants

	n (%)
Gender	
Female	202 (54.7%)
Male	167 (45.3%)
Age	
65-69	189 (51.2%)
70-79	123 (33.3%)
≥80	57 (15.4%)
Place of Residence	
Metropolis	196 (53.1%)
City	16 (4.3%)
Subprovince	27 (7.3%)
Village	130 (35.2%)
Marital status	
Married	272 (73.7%)
Single	97 (26.3%)
Alcohol Intake	
Yes	36 (9.8%)
No	333 (90.2%)
Cigarette Smoking	
Yes	96 (26.0%)
No	273 (74.0%)
Living Environment	
Alone	71 (19.2%)
With Spouse	212 (57.5%)
With wife and children	86 (23.3%)
Education Status	
Illiterate	74 (20.1%)
Primary School Graduate	165 (44.7%)
Middle School	27 (7.3%)
Secondary (High) School	48 (13.0%)
University Graduate	55 (14.9%)
Work	
Unemployed	140 (37.9%)
Retired	205 (55.6%)
Employed	24 (6.5%)
Level of Income	
Below Minimum Wage	75 (20.3%)
Minimum wage	136 (36.9%)
Double Minimum Wage	120 (32.5%)
Triple Minimum Wage	38 (10.3%)

The participants stated UI as a complaint in 28.5% (n=105) of the cases; while no such complaint was

expressed in 71.5% (n=264) of them. The mean age of the patients with UI was 72.56 ± 7.58 years (range: 65-96). Of those with IU, 27.6% (n = 29) were males and 72.4% (n = 76) were females. The mean age of females and males with UI was 72.27 ± 7.81 years and 73.31 ± 7.02 years, respectively with no significant difference between the two genders (p=0.53). The relationship of the features of individuals with UI is shown in Table 2.

Table 2. Comparison of conditions that may affect urinary incontinence

	Urinary incontinence present	No urinary incontinence	p
Gender			
Female	76 (37.6%)	126 (62.4%)	<0.001
Male	29 (17.3%)	138 (82.7%)	
Age			
65-69	48 (25.4%)	141 (74.6%)	0.006
70-79	30 (24.4%)	93 (75.6%)	
≥80	26 (45.6%)	31 (54.4%)	
Marital Status			
Married	65 (23.9%)	207 (76.1%)	0.002
Single	39 (40.2%)	58 (59.8%)	
Alcohol Intake			
Yes	0	36 (100%)	<0.001
No	104 (31.2%)	229 (68.8%)	
Smoking			
Yes	20 (20.8%)	76 (79.2%)	0.066
No	84 (30.8%)	189 (69.2%)	
Hypertension			
Yes	69 (33.7%)	136 (66.3%)	0.009
No	35 (21.3%)	129 (78.7%)	
COPD			
Yes	13 (35.1%)	24 (64.9%)	0.322
No	91 (27.4%)	241 (72.6%)	
DM			
Yes	34 (35.4%)	62 (64.6%)	0.046
No	70 (25.6%)	203 (74.4%)	
Hyperlipidemia			
Yes	10 (32.3%)	21 (67.7%)	0.598
No	94 (27.8%)	244 (72.2%)	
CAD			
Yes	12 (21.1%)	45 (78.9%)	0.193
No	92 (29.5%)	220 (70.5%)	
Activity with Friends			
Yes	30 (17.9%)	138 (82.1%)	<0.001
No	75 (37.3%)	126 (62.7%)	
Fecal incontinence			
Yes	9(60%)	6 (40%)	0.038
No	72 (33.5%)	143 (66.5%)	

COPD: Chronic Obstructive Pulmonary Disease; DM: Diabetes Mellitus; CAD: Coronary Artery Disease

The characteristics of patients with urinary incontinence are shown in Table 3.

Table 3. Characteristics of patients with urinary incontinence

	n %
How long have you been suffering from urinary incontinence? (Months)	36.78 ± 8:41
How often do you experience urinary incontinence?	
Once a week	42 (40.0%)
2 to 3 times per week	18 (17.1%)
Once a day	16 (15.2%)
Several times a day	12 (11.5%)
Continuously	17 (16.2%)
Do you consider incontinence as a disease?	
No	22 (21%)
Yes	83 (79%)
Did you tell the doctor about your incontinence complaint?	
Yes	59 (56.2%)
No	46 (43.8%)
If you didn't mention your incontinence complaint, what's the reason?	
I thought it was normal	35 (76.0%)
I was afraid to be examined	8 (17.4%)
Urinary incontinence did not bother me	3 (6.6%)
Have you been asked about incontinence?	
Yes	59 (56.2%)
No	46 (43.8%)
Are you on medication for incontinence?	
Yes	36 (34.3%)
No	69 (65.7%)
How long have you been receiving treatment? Months	19.69 ± 6:12
Complaint after taking medication	
Completely resolved	12 (11.4%)
Diminished	60 (57.1%)
Continues as same	33 (31.5%)
Did you use complementary medicine for your complaint of urinary incontinence?	
Yes	14 (13.3%)
No	91 (86.7%)
How was your first diagnosis performed?	
I told my complaint without being asked	49 (46.7%)
Doctor or nurse asked about my complaint	10 (9.5%)
I was not diagnosed	46 (43.8%)
Do you use a diaper for incontinence?	
Yes	23 (21.9%)
No	82 (78.1%)
Have you ever had prostate surgery? (For men)	
Yes	7 (24.1%)
No	22 (75.9%)
Average number of birth in women	4.36 ± 1.21

The characteristics of behaviors according to gender in patients with UI are shown in Table 4.

Table 4. Differences by gender in patients with UI

	Male n(%)	Female n(%)	p
Did you tell the doctor about your UI complaint?			
Yes	23 (79.3%)	41 (53.9%)	0.029
No	6 (20.7%)	35 (46.1%)	
Do you use medicine for UI?			
Yes	17 (58.6%)	24 (31.5%)	0.034
No	12 (41.4%)	52 (68.5%)	
Do you use diapers for UI?			
Yes	5 (17.2%)	18 (23.6%)	0.35
No	24 (82.8%)	58 (76.4%)	
Do you consider UI as a disease?			
Yes	4 (13.8%)	18 (23.7%)	0.265
No	25 (86.2%)	58 (76.3%)	
Have you used complementary medicine for UI?			
Yes	6 (20.6%)	7 (9.2%)	0.148
No	23 (79.4%)	69 (90.8%)	

UI: Urinary Incontinence

Among the patients, 72.9% (n=269) were never questioned by a doctor or nurse whether they had UI. Among the patients, 6.5% (n=24) reported to have fecal incontinence and 93.5% (n=245) stated that they had no fecal incontinence. History of prostate surgery was present in 16.9% (n=25) of the men participated in this present study.

Odds ratio (OR) for the prevalence of UI in females compared to males, in patients with hypertension compared to patients with no hypertension and in diabetic patients compared to non-diabetics was calculated as 2.87 (95% CI: 1.75-4.69, p <0.001), 1.87 (95% CI: 1.16-3.00, = 0.009) and 1.59 (95% CI: 1.12-2.61, p=0.046), respectively.

Among the male patients 65.2% (n=15) who reported UI as a complaint to the doctor were taking medication for this and 34.8% (n=8) were using no medications for this situation. Among the female patients, 56.0% (n=23) who reported UI as a complaint to the doctor were taking medication for this and 44.0% (n=18) were using no medications for this situation.

A significant association was found between age and gender and UI when UI was taken as the dependent variable and its associations with the independent variables, namely age, gender, presence of

hypertension (HT), Diabetes Mellitus (DM), Chronic Obstructive Pulmonary Disease (COPD) and Chronic Arterial Disease (CAD) were evaluated. Increased age and female gender have been shown to increase the UI risk ($p=0.030$ and $p < 0.001$, respectively).

Discussion

Our study is the first study on this subject in our local region. We think that it can contribute to the literature in terms of determining the situation of the people of the region and raising awareness of primary care physicians. The main findings of our study were that UI was common in geriatric individuals, the proportion of women with UI was higher than that of men, age and female gender were important risk factors for UI, that UI was not brought up as a problem in conversations between patients and physicians or nurses and that UI was not questioned adequately by physicians and nurses in geriatric individuals.

The prevalence of UI was found to be 28.5% ($n=105$) in this present study. A varying worldwide prevalence of 5-69% was reported in previous studies on UI (9). This wide range is probably due to different study populations and different definitions of UI that were used (9). The prevalence of UI was statistically significantly higher in women (37.6%, $n=76$) compared to men (17.3% , $n=29$) ($p < 0.001$). The prevalence of UI among European women was reported to range between 14.1% and 68.8% in a systematic review according to the age of the study sample (10). The prevalence of UI in women has been reported as 20.5% -68.8% in the studies performed in Turkey (11). On the other hand, the prevalence of UI in men varies between 5% and 24% in the literature (12).

Although UI has such a high prevalence, the proportion of patients seeking medical treatment is very low. Only 13-55% of women with UI worldwide consult a doctor for treatment (13). Most of the patients think they don't need treatment since they consider their symptoms not to be abnormal or serious or they believe they will go away in time and some are shy to consult a doctor for such a symptom (13). In our study, 43.8% of patients with UI had not mentioned

about their complaints to a doctor. Among the patients who sought no medical treatment for UI, 76% saw UI as a natural consequence of ageing, 17.4% were shy to have a physical examination and 6.6% reported that they were not uncomfortable to have UI. However, UI is a pathological condition at any age and in any case and should always be questioned during the evaluation of elderly patients (14-15). The majorities of women with stress UI do not consult a doctor because they are shy to undergo a gynecological examination and are afraid of surgeries which are actually effective treatment methods (13). Women with UI tend to go to the toilet frequently and empty their bladder, thus limit their social life or use hygienic measures to fight and hide the UI during their daily lives (16). In this present study, the ratio of men (79.3%) with UI reporting their complaints to a doctor was statistically significantly higher compared to women (53.9%). In addition, 58.6% of men but 31.5% of women with UI receive medication for UI and the difference between the two genders was statistically significant. This difference between men and women is likely to be due to the fact that men are more likely to verbalize this complaint. Although the rate of drug use between men and women who complained to a doctor was higher in men (65.2%) compared to women (56.0%), no statistically significant difference was found between the two genders ($p=0.51$). It suggests that men may be looking for more solutions for UI than women.

According to ACOVE (Assessing Care of Vinarable Elders) authors, UI symptoms should be asked to patients and caregivers twice a year (17). Especially among the professionals in disciplines serving the elderly, the knowledge and skills of the relevant health personnel should be developed by providing special training (18). Among the patients, 72.9% ($n=269$) were never questioned by a doctor or nurse whether they had UI. This rate is very high for patients over 65 years of age. The UI has been termed as a 'medical taboo' by the World Health Organization (WHO) and a great majority of the physicians who were reported to be hesitant to ask questions about UI (19). Studies have shown that physicians other than those who are particularly interested in UI have no

sufficient knowledge of UI (19). Given that UI is a common problem, primary care physicians should be encouraged to participate in the assessment and treatment of urinary incontinence.

Urinary incontinence may also lead to psychiatric morbidities such as social withdrawal, decreased self-esteem, depression and sexual dysfunction due to shyness and in addition, it seriously affects the quality of life of the patients (20). Patients with UI were demonstrated in this present study to participate less frequently in activities with friends. Some studies have shown that the quality of life of caregivers of patients with UI was also affected and it could result in psychological and physical fatigue and also social isolation and financial problems (21).

In many studies, presence of HT, DM, fecal incontinence and to be married have been shown to be risk factors for UI (1,7,10,11,22). Similarly, in this present study, UI was found more frequently in single patients and patients with HT, DM, fecal continence. The prevalence of UI was found to be high in patients with HT in a study by Reigota et al. including 622

women over 50 years; however, no a significant difference was found in the rate of UI among patients with and without DM (1).

Limitations of the study are as follows: presence and absence of UI was evaluated in this present study; no subtypes of UI were differentiated or questioned among the patients. No analysis could be performed on the subtypes of UI. The possibility of hiding the complaint of UI by the patients cannot be ruled out due to the fear of stigmatization and the face-to-face nature of the survey.

Conclusion

Urinary incontinence is very common among elderly women and men. However, these symptoms are considered as a normal state of aging by the patients or they are shy to report this complaint. In addition, the rate of questioning about this complaint by the physicians or nurses has been shown to be low. We think that the sensitivity of primary care workers who have a holistic approach to UI will increase the success in diagnosis and treatment of UI.

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