Original Article

Prevalence of Urinary Incontinence in Patients Presenting with Other Complaints in Urology and Gynecology Clinics

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Abstract

Objective: The aim of this study was to determine the prevalence of urinary incontinence in patients attending urology and gynecology clinics for unrelated reasons.

Methodology: Patients attending the urology and gynecology OPDs at a private medical center were approached and were offered an interview regarding urinary incontinence over a period from March 2022 to April 2023 . Patients who consented to participating in the study were given a questionnaire to fill ICIQ-SF questionnaire. Their data was recorded and analyzed in SPSS 24.

Results: The prevalence of urinary incontinence in our study cohort of 290 patients was 25.17%. The prevalence of urinary incontinence in males was 16.8% and 29.63% in females. Urban residents belonging to upper middle socio-economic bracket had a higher prevalence of urinary incontinence ($p<0.05$). Retirees had a higher prevalence of urinary incontinence ($p<0.05$). Comorbids such as diabetes and hypertension were found to be significantly associated with an increased prevalence of urinary incontinence ($p<0.05$).

Conclusion: Unreported urinary incontinence is much more common than is anticipated. In the light of lack of data regarding its true prevalence, physicians should screen their patients for urinary incontinence to detect this problem as soon as possible.

Keywords: Urinary Incontinence, Urge Incontinence, Stress Incontinence, Mixed Incontinence, Diabetes, Hypertension, BPH, Prostatectomy.

Introduction

The International Continence Society (ICS) defines urinary incontinence (UI) as the uncontrolled leakage of urine.(1) UI can be categorized into several types: stress urinary incontinence (SUI), where urine leaks due to physical exertion or actions like sneezing or coughing; urgency urinary incontinence (UUI), marked by urine leakage accompanied by an urgent need to urinate; and mixed urinary incontinence (MUI), which is a combination of SUI and UUI.(1) Other types include coital incontinence, postural incontinence, nocturnal enuresis, insensible incontinence, and continuous incontinence. Prevalence rates of UI are estimated to be between 25% and 45%, higher in older demographics.(2–5) This rate variation can be attributed to differences in research methods, participant characteristics such as age and health conditions, and the definitions applied to UI.

According to the ICS, factors increasing the risk of UI encompass age, obesity, number of childbirths, pregnancy, hormone replacement therapy during menopause, ethnic and racial background, history of hysterectomy, lifestyle choices, socioeconomic factors, smoking, level of physical activity, and associated health issues like diabetes, urinary tract infections, cognitive disorders, heart disease, and depression.(6) These elements can influence the likelihood and type of UI experienced.

The influence of urinary incontinence (UI) on the lives of individuals is profound, often resulting in emotional

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distress, such as anxiety and depression, diminished quality of life (QoL), and significant economic burden.(7–10) The stigma and misconception of UI as a normal aspect of aging can inhibit individuals, especially men, from seeking appropriate medical intervention.

The extent and nature of UI in the male population have not been as extensively studied as in females. Data from community-based studies like Boston Area Community Health Survey, the National Health and Nutrition Examination Survey, Epidemiology of Lower Urinary Tract Symptoms study, and the Expanded Prostate Cancer Index Composite, indicate that UI prevalence in men ranges from 5.3% to 45.8%, with the incidence of various UI subtypes showing variation.(11) In these cohorts, the occurrence of different UI subtypes among men showed considerable disparities. Reports of urgency UI (UUI) ranged from 1.2% to 48.6%, stress UI (SUI) from 0.8% to 12.5%, mixed UI (MUI) from 1.0% to 15.4%, and other forms of UI, including post-void dribbling (PVD), from 2.9% to 59% .(11) An analysis of the BACH cohort indicated that 8.7% of male respondents experienced PVD.(12) In the EPIC study, post-micturition symptoms were noted by 16.9% of male participants, while the EpiLUTS survey found PVD constituted 93.0% of cases in the 'other incontinence' category.(13) Further research in this area is crucial for a better understanding.

Research into male urinary incontinence (UI) in Pakistan is relatively unexplored. Although existing research has examined UI's prevalence and effects among various groups - like elderly nursing home residents, individuals with severe incontinence, and young women - such findings might not be indicative of the overall male demographic in Pakistan. These studies have utilized diverse definitions and methodologies to evaluate UI, leaving the comprehensive epidemiological understanding of male UI in Pakistan ambiguous and highlighting the need for further research to accurately define the condition's prevalence and distribution nationally.

The types of male UI mirror those found in females, encompassing stress UI, urge UI, mixed UI, overflow UI, and functional UI. Stress UI involves involuntary urine leakage under increased abdominal pressure, for example, during coughing, sneezing, or lifting. Urge UI is characterized by an abrupt, intense urge to urinate, leading to involuntary leakage. Mixed UI is a combination of stress and urge UI. Overflow UI occurs when urine leaks due to the bladder not emptying completely, often due to blockage or nerve damage. Functional UI results from physical or cognitive impairments hindering timely access to a toilet. Among these, mixed UI is the most prevalent in males, followed by urge UI, stress UI, and other types.(14)

Various factors contribute to male UI, ranging in complexity and impact based on the UI's subtype and intensity. Common influences include age, prostate issues, nerve damage, surgeries on the pelvic or spinal areas, obesity, diabetes, heart disease, urinary tract infections, constipation, limited mobility, wheelchair dependence, and certain medications.(15–18) These factors can alter the functionality and structure of the lower urinary tract, pelvic floor muscles, nervous system, and bladder, leading to UI. However, the exact causal links between these factors and UI are not yet fully understood, necessitating more research to uncover the underlying mechanisms and interactions.

UI, though not a life-threatening condition, is chronic and significantly impacts quality of life (QoL) and the social and emotional health of affected individuals. It occurs more frequently in women and is associated with an increased risk of depression.(19) A common barrier to seeking medical help is the trivialization of symptoms and the embarrassment associated with UI.(8) Additionally, there is a scarcity of comprehensive data comparing risk factors, severity, and QoL implications across different UI subtypes, with most existing research focused on outpatient settings.(20–22)

As men age, the likelihood of encountering urinary incontinence increases.(23,24) Research conducted on men residing in communities revealed a rise in the occurrence of at least one incident of urinary incontinence over the past year. This increase was observed from nearly 5% in the age group of 19 to 44 years, to 11.2% in those aged 45 to 64 years, and further to 21% in individuals over 65 years.(25) Additional studies have shown that in men above 65, the occurrence of urinary incontinence varies

between 11% and 34%, with instances of daily incontinence ranging from 2% to 11%.(23,26,27) Notably, the prevalence is significantly greater among men residing in nursing homes compared to those in community dwellings, and those suffering from urinary incontinence are more prone to being institutionalized.(28–30)

Existing studies from the Pakistan indicate a prevalence range between 11.5% and 44.4%.(31,32) In a notable

cross-sectional study conducted in Peshawar, Pakistan, the incidence and clinical profiles of urinary incontinence were examined in women aged over 18 years. This study revealed that approximately 32.5% of the participants experienced urinary incontinence at least once per month.(33) The study further identified a correlation between the incidence of urinary incontinence and factors such as advancing age, increased parity, and higher body mass index. Among the various types of urinary incontinence identified, urge urinary incontinence was the most prevalent, followed by stress urinary incontinence and mixed urinary incontinence.

According to studies, patients who visit urology and gynecological clinics often have urine incontinence (UI) along with other disorders. The frequency and particular kind of UI seem to vary depending on the demographic traits, the definitional standards, and the techniques utilized to measuring it. As such, UI screening is necessary to make sure that individuals afflicted with this illness undergo appropriate care and management techniques.

Methodology

This was a cross-sectional investigation, conducted from March 2019 to February 2020 in the OPD of MTI-ATH Abbottabad's Gynae/obstetrics and urology departments. This study recruited patients from the hospital's consultant clinics using a subsequent non-probability selection approach. This research was conducted after obtaining the from the institutional review board. Males and females over the age of eighteen who sought treatments in urological or gynecological units and reported experiencing involuntary urine incontinence were among the criteria used to select the participants. Patients going through gestational amenorrhea, people with cognitive disabilities that prevented them from filling out the survey, and people who did not report having urine incontinence were excluded. Additionally, patients having diabetes, uterovaginal prolapse, diuretic medications, recent catheterization application, urinary obstructions, urinary tract diseases, and ongoing urological disorders were also excluded. The interviewing process started with an argument regarding incontinence, and individuals who answered favorably were invited to participate in the study. Following an explanation of the objectives, possible risks, and advantages of the study, willing participants were given directions to an isolated space for additional briefing. A Voluntary and Informed Consent Form had to be signed for consent to be officially obtained. The rate, degree of severity, and effect of urine incontinence on quality of life were assessed in the study using the "International Consultation on Incontinence Questionnaire - Short Form (ICIQ-SF)". This questionnaire estimates the volume of urine lost, how often it occurs, and how it affects day-to-day activities. The results were combined to provide a thorough evaluation. The demographic and health data of the participants were documented, encompassing gender, age, measurement of height and weight, body mass index, marriage status, residence, financial status, level of education, job status, and co-occurring conditions like diabetes and high blood pressure. Employing the SPSS-24, data analysis was done, and chi-square and independent t-tests were used to evaluate inferential statistics. The level of statistical significance was established at a p-value of ≤0.05.

Results

The mean age of the study population was 47.32 ± 5.18 years, with no significant age difference observed between patients with UI (46.21 ± 4.46 years) and without UI (47.23 ± 3.96 years; P = 0.697). Similarly, weight, height, and BMI did not differ significantly between the two groups, indicating that these physical attributes were not associated with the presence of UI. The prevalence of UI was found to be significantly higher in females (29.63%) compared to males (16.86%; P = 0.017). A notable difference in the prevalence of UI was also seen between urban (34.4%) and rural residents (14.7%), with urban residency associated with a higher incidence of UI (P < 0.001). While marital status did not show a significant correlation with UI, socioeconomic status exhibited a notable association; individuals from the upper-middle socioeconomic bracket had a higher prevalence of UI (55.56%) compared to the lower-middle (20.61%) and low (17.5%) statuses (P < 0.001). Regarding educational status, no significant difference was observed in the prevalence of UI among the different education levels. Employment status, however, was significantly associated with UI, with 66.42% of retired individuals reporting UI compared to 15.15% of non-retired participants (P < 0.001). Clinical comorbidities such as hypertension and diabetes mellitus showed significant associations with UI. Patients with hypertension had a 29.3% prevalence of UI versus 16.3% in non-hypertensive patients (P

= 0.018). Furthermore, a substantial association was observed in diabetic patients, with a 46.67% prevalence of UI as opposed to 15.5% in non-diabetics (P < 0.001). These findings are summarized in table-1.

Table 1: Prevalence of UI and its associated factors in our cohort (n=290

Variable	Total	Urinary Incontinence	No Incontinence	p value*
Age (yrs)	47.32 ± 5.18	46.21 ± 4.46	47.23 ± 3.96	0.697
Weight (Kg)	68.82 ±3.24	68.19 ±2.13	69.91 ±5.03	0.684
Height (meters)	1.72 ±0.08	1.7 ±0.02	1.71 ±0.03	0.512
BMI (kg/m^2)	24.59 ±4.32	23.39 ±5.04	24.66 ±4.75	0.667
Sex				
Male	101	17 (16.8%)	84 (83.2%)	0.017
Female	189	56 (29.63%)	133 (70.37%)	
Residence				
Urban	154	53 (34.4%)	101 (65.6%)	<0.001
Rural	136	20 (14.7%)	116 (85.3%)	
Marital Status				
Married	132	29 (22%)	103 (78%)	0.251
Single	158	44 (27.84%)	114 (72.16%)	
Socioeconomic Status				
Low	80	14 (17.5%)	66 (82.5%)	<0.001
Lower Middle	165	34 (20.61%)	131 (79.39%)	
Upper Middle	45	25 (55.56%)	20 (44.44%)	
Education				
Illiterate	55	11 (20%)	44 (80%)	0.362
≤ Matriculation (Sec School Certificate)	160	39 (24.37%)	121 (75.63%)	
≥ Fsc (Higher Sec school Certificate).	75	23 (30.67%)	52 (69.33%)	
Not working anymore				
Yes	136	7 (5.15%)	129 (94.85%)	<0.001
No	154	66 (42.86%)	88 (57.14%)	
Hypertension				
Yes	198	58 (29.3%)	140 (70.7%)	0.018
No	92	15 (16.3%)	77 (83.7%)	
Diabetes Mellitus				
Yes	90	42 (46.67%)	48 (53.33%)	<0.001
No	200	31 (15.5%)	169 (84.5%)	

Table 2 displays the findings from the regression analysis examining factors associated with urinary incontinence. Gender differences are statistically significant, with females having an OR of 2.92 (95% CI: 1.45-5.25, p = 0.001) and an aOR of 2.1 (95% CI: 1.01-4.27, p = 0.046), indicating a higher risk of urinary incontinence compared to males, who serve as the reference group.

Urban residence is significantly associated with urinary incontinence, having an OR of 3.44 (95% CI: 1.90-5.95, p < 0.001) and an aOR of 4.68 (95% CI: 2.40-9.1, p < 0.001) when compared to rural residence. Socioeconomic status, classified into upper-middle class and lower-middle class, compared to the low socioeconomic status group (reference), did not show a statistically significant association with urinary incontinence (p = 0.631 and p = 0.515, respectively). Retirement status is inversely associated with urinary incontinence, with retired individuals having a significantly lower OR of 0.14 (95% CI: 0.06-0.28, p < 0.001) and an aOR of 0.17 (95% CI: 0.07-0.37, p < 0.001). Hypertension is positively associated with an increased risk of urinary incontinence, with an OR of 5.50 (95% CI: 2.22- 13.4, p < 0.001) and an aOR of 4.21 (95% CI: 1.81-9.5, p < 0.001). Similarly, Diabetes Mellitus is associated with a higher risk of urinary incontinence, having an OR of 2.62 (95% CI: 1.51-4.34, p < 0.001) and an aOR of 4.39 (95% CI: 2.16-9.36, p < 0.001). These adjusted models indicate that being female, residing in urban areas, and having comorbidities such as hypertension and diabetes mellitus are associated with a higher risk of urinary incontinence, whereas being retired is associated with a lower risk.

Table 2: Results of Regression analysis of UI-associated factors

Variable	Odds Ratio (95% CI%)	p-value	Adjusted Odds Ratio (95%CI%)	p-value
Sex				
Female	2.92 (2.45-4.25)	0.001	3.1 (2.01-5.01)	0.047
Male	Ref		Ref	
Residencial status				
Urban residence	2.94 (2.10-4.95)	<0.001	3.68 (1.40-8.1)	<0.001
Rural residence	Ref		Ref	
Socioeconomic Status				
Upper Middle Class	1.18 (0.55-2.60)	0.631		
Lower Middle Class	1.32 (0.56-2.86)	0.515		
Low	Ref			
Not working anymore				
Yes – Not employed	0.14 (0.06-0.28)	<0.001	0.17 (0.07-0.37)	<0.001
No	Ref		Ref	
Hypertension				
Yes	5.50 (2.22-13.4)	<0.001	4.21 (1.81-9.5)	<0.001
No	Ref		Ref	
Diabetes Mellitus				
Yes	2.62 (1.51-4.34)	<0.001	4.39 (2.16-9.36)	<0.001
No	Ref		Ref	

Table 3 compares the prevalence of urinary incontinence on the basis of gender-stratification in our study cohort comprising of 290 patients. In males, the only significant difference was observed in age, with those experiencing UI being younger on average (68.51 ± 4.27 years) compared to those without UI (71.22 ± 8.29 years; P = 0.014). Weight, height, and BMI did not

Table 3:Sex distribution of urinary incontinence and associated factors in our study population						
	Men			Women		
	Urinary Incontinence	No Urinary Incontinence	p-value	Urinary Incontinence	No Urinary Incontinence	p-value
Age (years)	47.28 ±5.37	44.22 ±2.29	0.013	37.65 ±3.45	36.32 ±3.28	0.7
Weight (Kg)	62.32 ±6.34	61.42 ±3.25	0.71	61.72 ±3.32	60.87 ±4.07	0.63
Height (m)	1.73 ±0.04	1.72 ±0.08	0.97	1.58 ±0.05	1.56 ±0.06	0.64
BMI (kg/m^2	24.55 ±2.23	25.84 ±4.65	0.82	22.54 ±4.18	21.28 ±3.98	0.82
Residencial status						
Urban	12 (21.43%)	44 (78.57%)	0.17	41 (41.84%)	57 (58.16%)	<0.001
Rural	5 (11.11%)	40 (88.89%)		15 (16.48%)	76 (83.52%)	
Marital Status						
Married	10 (15.15%)	56 (84.85%)	0.54	19 (31.82%)	47 (68.18%)	0.85
Single	7 (20%)	28 (80%)		37 (21.5%)	86 (78.5%)	
Socioeconomic Status						
Low	4 (10.81%)	33 (89.19%)	0.47	10 (23.26%)	33 (76.74%)	<0.001
Lower Middle	9 (20.45%)	35 (79.55%)		25 (20.66%)	96 (79.34%)	
Upper Middle	4(20%)	16 (80%)		21 (84%)	4 (16%)	
Educational Status						
Illiterate	3 (14.3%)	18 (85.7%)	0.75	8 (23.53%)	26 (76.47%)	0.0542
≤ matriculation	9 (20%)	36 (80%)		30 (26.1%)	85 (73.9%)	
≥Intermediate	5 (14.3%)	30 (85.7%)		18 (45%)	22 (45%)	
Not working anymore						
Yes	3 (5.26%)	54 (94.74%)	<0.001	4 (5.06%)	75 (94.94%)	<0.001
No	14 (31.82%)	30 (68.18%)		52 (47.27%)	58 (52.73%)	
Hypertension						
Yes	15 (23.1%)	50 (76.9%)	0.024	43 (32.33%)	90 (67.67%)	0.21
No	2 (5.56%)	34 (94.44%)		13 (23.21%)	43 (76.79%)	
Diabetes Mellitus						
Yes	12 (33.33%)	24 (66.67%)	0.001	30 (55.56%)	24 (44.44%)	<0.001
No	5 (7.7%)	60 (92.3%)		26 (19.26%)	109 (80.74%)	

show significant differences between males with and without UI.

Among females, no significant differences in age, weight, height, or BMI were detected between those with and without UI. The prevalence of UI in urban residence is markedly higher for both genders, with significant associations noted in females (P < 0.001). Marital status did not significantly correlate with UI in either gender. Socioeconomic status showed a significant association in females, with a higher prevalence of UI in the lower-middle class compared to the low socioeconomic status group (P < 0.001). Educational status revealed a borderline significant trend in females, with those having at least a matriculation education showing a higher prevalence of UI compared to illiterate females (P = 0.0542). Employment status was significantly associated with UI in females, with non-retired females exhibiting a higher prevalence of UI (P < 0.001). This association was not observed in males. Regarding comorbid conditions, hypertension was significantly associated with UI in males (P = 0.024) but not in females. Diabetes Mellitus showed a strong association with UI in both genders (males: P = 0.001; females: P < 0.001).

The data suggest that certain demographic and health-related factors, such as age in males, urban residence in both genders, socioeconomic status in females, and comorbid conditions like diabetes mellitus, are associated with the prevalence of urinary incontinence in this patient population.

In our analysis of 290 patients, Table 4 explores the relationship between the severity of urinary incontinence (UI) and a range of baseline characteristics. The average age of patients was 69.28 ± 4.01 years, with no significant age difference noted between those with occasional UI (70.97 ± 3.36 years) and frequent UI (69.53 ± 4.01 years; P = 0.331). Weight and height were similarly not associated with the frequency of UI. The Body Mass Index (BMI) of patients did not significantly differ between the occasional and frequent UI groups. Gender was significantly associated with UI severity; females had a higher prevalence of frequent UI (66.07%) compared to males (23.53%; P = 0.002). Residence showed a trend towards significance, with rural residents having a slightly higher proportion of frequent UI (35%) compared to urban residents (60.38%), although this did not reach statistical significance (P = 0.052).

Marital status, whether married or single, did not significantly correlate with the severity of UI. Socioeconomic status also did not demonstrate a significant association with UI frequency, though there was a non-significant trend indicating a higher frequency of UI in the upper-middle class. Educational

Table 4: Stratification of study population according to severity of urinary incontinence and associated risk factors.

Variable	Total	Occasional Urinary Incontinence	Frequent Urinary Incontinence	p value
Age (years)	46.21±3.46	45.77±4.19	46.19±2.01	0.33
Weight (Kg)	68.19±2.13	68.29±1.74	69.37±3.22	0.87
Height (meter)	1.72±0.02	1.71±0.03	1.71±0.08	0.73
BMI kg/m^2	23.39±5.04	25.31±2.99	24.44±3.14	0.82
Gender				
Male	17	13 (76.47%)	4 (23.53%)	0.002
Female	56	19 (33.93%)	37 (66.07%)	
Residence				
Urban	53	21 (39.62%)	32 (60.38%)	0.052
Rural	20	13 (65%)	7 (35%)	
Marital Status				
Married	29	13 (44.83%)	16 (55.17%)	0.88
Single	44	19 (43.18%)	25 (56.82%)	
Socioeconomic Status				
Low	14	9 (64.21%)	5 (35.71%)	
Lower Middle	34	20 (58.82%)	14 (41.18%)	0.132
Upper Middle	25	9 (36%)	16 (64%)	
Educational Status				
Illiterate	11	6 (54.55%)	5 (45.45%)	0.83
≤matric	39	18 (46.15%)	21 (53.85%)	
≥Intermediate	23	10 (43.48%)	13 (56.52%)	
Retired				
Yes	7	2 (28.57%)	5 (71.43%)	0.25
No	66	34 (51.52%)	32 (48.48%)	
Hypertension				
Yes	58	22 (37.93%)	36 (62.07%)	0.014
No	15	11 (73.33%)	4 (26.67%)	
Diabetes Mellitus				
Yes	42	18 (42.86%)	24 (57.14%)	0.722
No	31	12 (38.71%)	19 (61.29%)	

status, divided into illiterate, matric, and ≥intermediate levels, did not show a significant difference in the prevalence of UI. Retirement status was not significantly associated with UI frequency. In terms of health conditions, hypertension was significantly related to the frequency of UI, with a higher prevalence in patients with frequent UI (62.07%) compared to those with occasional UI (37.93%; P = 0.014). Diabetes Mellitus did not show a significant association with UI frequency. The findings suggest that gender and hypertension are significantly associated with the frequency of UI, whereas other demographic factors such as age, residential status, BMI, socio-economic status, marital status, educational level, and employment status (working or not working anymore) do not show a significant correlation with the severity of UI.

The most common type of incontinence in men was Urge Incotinence which was observed in 10 patients (58.82%) followed by mixed incontinence in 5 (29.41%) and stress incontinence in 2 (11.76%). Whereas, the most common type of urinary incontinence in females was stress urinary incontinence, observed in 34 (60.71%) females. It was followed by urge incontinence in 16 (28.57%) women and mixed incontinence in the remaining 6 (10.71%) women.

Discussion

This study assessed the incidence of urinary incontinence among patients visiting urology and gynecology clinics for various other concerns. Our findings revealed that 25.17% of the cohort (73 out of 290 individuals) experienced incontinence. Comparable results have been observed in prior research. Kessler and colleagues noted a prevalence rate of 20.7% in their research.(34) Similarly, Simsand associates identified a 28% occurrence of incontinence among the elderly.(35) The higher prevalence rate in our study aligns with other research, indicating a significant correlation between shortness of breath and incontinence in the elderly.(36–38) This phenomenon may stem from a disrupted neurophysiological balance crucial for maintaining continence. As Burge and colleagues discuss, an imbalance in the autonomic nervous system can trigger involuntary urine release, often accompanied by an urgent need to void.(39) Moreover, increased pressures within the thoracic and abdominal cavities, commonly associated with coughing, and neurological imbalances in the elderly can exacerbate this issue.(40) Consequently, individuals reporting leakage typically demonstrate a reduced capacity to retain urine.

The variability in prevalence rates across studies may be attributed to the inclusion of both sexes, with the prevalence of urinary incontinence showing a gender-related disparity.(41,42) Research suggests that incontinence is more prevalent in women, with findings indicating 74.6% of 59 women reported incontinence, compared to 51% of 49 men. These observations are in line with those reported by Hrisanfow and colleagues, who noted gender differences in the prevalence of urge incontinence among individuals with COPD.(43) In our sample, 16.8% of men (17 individuals) and 29.63% of women (56 individuals) experienced urinary incontinence, with women being twice as likely to report incontinence compared to men.

Further supporting this gender disparity, Hirayama and colleagues found a 7.6% prevalence of incontinence among 668 male subjects.(44) A separate study from Manchester disclosed a 68% prevalence of incontinence among women with cystic fibrosis.(45) Forecasts from another study estimate that by 2025, approximately 134,000 women over 70 with COPD will report experiencing urinary incontinence.(44)

The study further examined the impact of conditions such as diabetes and hypertension on urinary incontinence, revealing a significant correlation. Patients with either hypertension or diabetes were found to be four times more likely to experience urinary incontinence compared to those without these conditions. Among male participants, every hypertensive individual reported symptoms of urinary incontinence. This aligns with findings from other research.(46,47) Consequently, comorbidities have emerged as a predominant factor contributing to urinary incontinence across both genders.

There exists an imperative for both healthcare professionals and familial caregivers of the elderly to proactively address issues of urinary incontinence. The lack of widespread knowledge regarding treatment options, coupled with the stigma often associated with urinary incontinence, hinders individuals from seeking care for both the condition itself and its underlying causes. A multitude of interventional strategies have been globally recognized and adopted, including pelvic floor muscle training, bladder control techniques, lifestyle changes, medicinal treatments, various assistive devices, and surgical interventions.(48) As such, engaging with a physiotherapy specialist to administer rehabilitative exercises could be crucial to enhancing and ensuring the timely and effective activation of pelvic floor muscles, thereby improving their strength and stability.(49)

This study's results are significant as they present updated data on the prevalence of urinary incontinence among the elderly. The etiology of urinary incontinence in this demographic is complex and may stem from changes in urinary system anatomy. This condition warrants attention and should be examined alongside other contributing factors. The scope of our analysis was constrained by resource limitations, precluding the investigation of certain key predictive variables. Additionally, the study's findings are specific to a single-center cohort, which may affect generalizability.

Conclusion

In conclusion, a notable proportion of the senior population in our research exhibited urinary incontinence. It is apparent that incontinence is influenced by a variety of elements, including employment status and comorbid conditions, rather than solely by the process of aging. Furthermore, it is important to note that our study's conclusions are drawn from data excluding elderly females with a history of gynecological conditions or procedures, yet the majority of the participants experiencing incontinence were women.

Study Limitations:

The current study presents findings from a single-center cross-sectional analysis and did not explore the underlying pathophysiological mechanisms or specific ailments contributing to the unreported cases of urinary incontinence within our patient cohort. This limitation hinders the ability to generalize the results to a broader population and to understand the causative factors behind the observed incontinence, which may be critical for developing targeted interventions.

Recommendations:

In light of the insights garnered from this study, a series of action steps can be advised to mitigate the impact of urinary incontinence (UI) and enhance the quality of patient care. Healthcare practitioners are encouraged to embed routine UI screenings into the standard care for patients with related comorbidities, such as diabetes and hypertension, particularly during urology and gynecology appointments. There is a pressing need to craft and implement prevention and management plans that cater specifically to women, who are disproportionately affected by UI.

Furthermore, amplifying public health education through the creation and distribution of informative materials about UI could significantly diminish the stigma attached to the condition and bolster patient involvement in their own care processes. Educational programs designed for caregivers and relatives of the elderly could substantially aid in the early detection of UI, fostering a more open dialogue and ensuring timely medical intervention.

Accessibility to physical therapy, with a special focus on pelvic floor muscle training, should be a primary consideration in UI treatment, necessitating an increase in trained professionals and resources for patients to perform exercises independently. Care models for chronic diseases need to be expansive, incorporating UI management to facilitate comprehensive care. Research initiatives should pivot towards multicenter studies that delve into the root causes of UI and the efficacy of varied treatment modalities across diverse demographics.

Lastly, advocating for policy reforms that acknowledge UI as a critical health issue and its integration into standard healthcare protocols can drive a significant decrease in the prevalence of UI, ultimately elevating the living standards of those affected.

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