

Urinary Incontinence in Women: Prevalence, Characteristics and Effect on Quality of Life. A primary care clinic study

Slomo Vinker MD¹, Boris Kaplan MD², Sasson Nakar MD¹, Gita Samuels MD¹, Gidon Shapira MD¹ and Eliezer Kitai MD¹

Departments of ¹Family Medicine and ²Gynecology and Obstetrics, Rabin Medical Center (Beilinson Campus), Petah Tiqva, and Sackler Faculty of Medicine, Tel Aviv University, Israel

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Abstract

Background: Urinary incontinence in older women is common. Its characteristics and impact on quality of life is not well established since these women are usually reluctant to tell their healthcare providers about the problem.

Objective: To determine the characteristics of urinary incontinence in women and the manner in which it affects patients' quality of life.

Methods: Twenty family physicians were requested to distribute a questionnaire to the first 25 consecutive women aged 30 to 75 years who visited their clinic for any reason. The questionnaire covered general health issues, symptoms of urinary incontinence, and quality of life.

Results: A total of 418 women, mean age 50.0 ± 11.8 years, completed the questionnaire (84% response rate). Of these, 148 (36%) reported having episodes of urinary incontinence. Urinary incontinence was found to be associated with older age, menopause, obesity and coexisting chronic disorders. Sixty percent of the women with urinary incontinence found it to be a disturbing symptom, and 44% reported that it had a detrimental effect on their quality of life. Only 32% of the affected women had sought medical advice, half of them from their family physician. Treatment was recommended to 66% of those who sought help, and in about two-thirds of these it brought some measure of relief.

Conclusions: Urinary incontinence is a common complaint among women attending primary care clinics, but it does not receive appropriate attention. Though it often adversely affects quality of life, only a small proportion of women seek medical advice. Family physicians should raise the issue as a part of the routine general health check-up.

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Urinary incontinence, the involuntary loss of urine, is a hidden problem. Individuals suffering from this disorder often try to conceal the fact, either by using sanitary pads or by changing their lifestyle, so as to avoid activities that might exacerbate the disorder [1].

In a recent survey study of 50 family physicians, most

estimated the prevalence of UI to be as low as 0.5–5% [2]. However, community and practice-based studies have yielded rates between 14% and 58% [3–7]. The symptom is 2.5 to 4 times more common in women than in men; it can occur anytime after adulthood and increases with age [4,5]. Urinary incontinence can be categorized into four main types – stress, urge, overflow, and functional incontinence – although most patients present with a mixed picture [8,9].

Urinary incontinence can cause certain local complications, such as skin rash, worsening of pressure sores, and skin infections [10]. More important, however, are the social and psychological damage inflicted by UI, such as voluntary isolation, reduced self-esteem, depression, adverse effect on sexual relations and tension within the family [5,9,11,12].

The aim of our study was to evaluate the characteristics of UI among adult women presenting to a primary care clinic for various reasons and to examine its effects on quality of life.

Materials and Methods

We defined UI as any temporary or permanent leakage of urine, from a few drops very infrequently to large quantities at frequent intervals, which appear at any time after adulthood.

Study design and population

A cross-sectional, practice-based study was conducted in 20 primary care clinics in Israel. The attending physicians were asked to distribute a specially designed questionnaire on UI to 25 consecutive women aged 30–75 years who visited their clinic for any reason. Most of the physicians were qualified family physicians involved in academic activities and research. Patients confined to the home or institutionalized were excluded. Each woman completed the questionnaire only once.

Questionnaire

The following topics were covered in the questionnaire:

- Demographic details: age, marital status, and country of origin.
- General health and health habits: weight, height, physical activity, smoking, coffee drinking, coexistent chronic illness,

UI = urinary incontinence

general state of health. Overweight was defined as body mass index above 25.

- Gynecological history: nature of menstrual cycle, number of births, previous hysterectomy, current hormone replacement therapy.
- UI: age at onset of symptoms, current complaints, frequency, aggravating factors, medical attention, functional impairment and effect on quality of life.

Statistical analysis

Descriptive statistics were used to analyze prevalence data. The chi-square test (χ^2) was used to assess the association between categorical variables, and Student's *t*-test was used to compare continuous variables.

Table 1. Demographic data, general health and gynecological history of women with and without urinary incontinence

	Total	No UI	UI	P
No. of patients	418	270	148	–
Average age (mean \pm SD)	50.0 \pm 11.8	48.5 \pm 11.6	52.4 \pm 11.7	0.001
Marital status				
Married	78%	81%	72%	
Divorced	10%	9%	12%	0.033
Widowed	9%	6%	14%	
Single	3%	4%	2%	
Country of origin				
Israel	42%	45%	37%	
Europe	37%	34%	41%	NS
Africa	17%	18%	16%	
America	4%	3%	6%	
Smokers	23%	21%	24%	NS
Regular participation in sports	18.0%	16.5%	18.3%	NS
Body mass index (mean \pm SD)	25.9 \pm 4.8	25.0 \pm 4.3	27.6 \pm 5.2	< 0.0001
General health status				
Below average	16%	13%	22%	
Average for age	61%	64%	56%	0.05
Above average	23%	23%	22%	
Coexistent chronic disease	29%	22%	42%	< 0.0001
No. of births				
0	5%	4%	6%	NS
1–2	47%	49%	46%	
3–4	42%	41%	42%	
5	6%	6%	6%	
Menopause	51%	44%	63%	< 0.001
Current HRT (% of women in menopause)	23.0%	22%	23%	NS
Hysterectomy	11.5%	9%	16%	0.03

Results

A total of 418 women (84% response rate) completed the questionnaire. Mean age was 50.0 \pm 11.8 years; most were born in Israel or Europe. Of these women, 29% suffered from a chronic illness and 39% were overweight. Other demographic details, general health, health habits and gynecological history are shown in Table 1.

Urinary incontinence was reported by 148 of the 418 women (36%); 21% had had an event of UI in the previous month (86/418), and 37% suffered from UI at least once a day. Mean age (\pm SD) at onset of symptoms was 43 \pm 13 years. Aggravating factors included cough, prolonged voluntary urinary control, and physical effort. Other details of UI are shown in Table 2.

Only 32% of the women with UI had sought medical advice,

Table 2. Details of urinary incontinence in 148 (36%) affected women

Frequency of complaint	
At least once a day	37%
Once a week	15%
Less than once a week	48%
Time of incontinence	
Mainly during the day	70%
Day and night	24%
Mainly at night	6%
Aggravating factors	
Cough	75%
Prolonged abstinence from urination	47%
Physical exertion	43%
Medical consultation*	
With any doctor	32%
Gynecologist	23%
Family physician	17%
Urologist	13%
Other	3%
Treatment**	
Any treatment whatsoever	21%
Medication	12%
Surgery	6%
Physiotherapy	5%
Other	1%
Success of treatment	
Successful	32%
Partially successful	32%
No response	36%

* Consultation with more than one physician possible.

** More than one type of treatment possible.

half of them from their family physician. Approximately one-fifth of the UI group had received some type of treatment, and this proved at least partly beneficial in 67% of them.

Regarding the subjective aspects of the disorders, 59% of the women with UI found the symptom more than moderately disturbing, and 58% reported that UI had a moderate to severe effect on their quality of life. It was the latter subgroup that tended to seek medical advice (57% vs. 12%, $P = 0.005$) and treatment (33% vs. 5%, $P < 0.001$). No association was found between a request for medical advice and country of origin, marital status, general health, or coexistent chronic illness.

Comparison of the women with and without UI [Table 1] revealed that those with UI were significantly older (52.4 ± 11.6 vs. 48.5 ± 11.6 years, $P = 0.001$), tended to be single ($P = 0.035$), and were generally post-menopausal (63% vs. 44%, $P < 0.001$). A positive association was found between UI, poor general health ($P = 0.05$), obesity ($P < 0.001$), and chronic illness ($P < 0.0001$). No association was found between UI and country of origin, smoking, physical exercise, number of births, or current HRT.

Discussion

In our study, the prevalence of urinary incontinence was 36%, one of the highest rates reported to date [3–7]. This may be due to our relatively broad definition of the term or to selection bias, since we questioned women who were visiting their family physician, making them, by definition, a generally “less healthy” population. Prevalence studies of UI and associated risk factors are abundant [3–7,9,11,13,14]. We aimed to emphasize the effect of UI on quality of life and on the coping method developed; therefore we assumed that the methods used here were not biased.

There is a persistent myth that UI in females is a normal consequence of aging. While normal aging is not a cause of incontinence, age-related changes in lower urinary tract function predispose the older person to UI. Our findings for risk factors for UI – namely advanced age, obesity (even mild), hysterectomy and coexistent chronic illness – correlate with earlier reports [3,15]. According to Brown et al. [3], age is the most important independent variable associated with an increased prevalence of UI, though it is difficult to distinguish the independent effect of age per se and menopause. The effect of hysterectomy is controversial, with some authors noting a connection [3,8], and others not [13,16].

The increased prevalence of UI among the chronically ill stems from many causes, such as immobility, local factors, increased intraabdominal pressure and neuropathic damage to the bladder; indeed, UI alone may lead to a perception of poor general health.

It is noteworthy that in our study, HRT was not associated with a protective effect against the development of UI. In some cases, however, HRT is given in an attempt to treat the UI, so this finding is inconclusive in a cross-sectional study.

Urinary incontinence is not life threatening, but it can seriously lower quality of life [17]. We observed that more than half the affected women found UI disturbing and claimed it had a detrimental effect on their daily functioning. Further research is needed using standardized quality of life tools and assessment of objective effects on the quality of life, such as use and type of sanitary protection. In earlier reports, up to 60% of affected women were disturbed or worried by UI [3,5,18], and half of them went so far as to describe it as a moderate or even severe social handicap [5]. Low self-esteem, embarrassment, fear of odor, feelings of unattractiveness and of being “unusual” are but a few of the complaints [1]. However, in the present study, the percentage of affected women who sought medical attention was low. While the question “Did you seek treatment for UI?” is subject to recall bias, our 32% positive response rate was not dissimilar to the 25% reported by Samuelsson et al. [18] for women who started treatment when it was offered by their physicians. In some cases, a few years pass before the patient brings the problem to the attention of her physician [5,13]. Studies have shown that personal embarrassment, the acceptance of UI as part of the “natural” aging process, and the relative lack of awareness of the problem among family physicians all play a role in concealing the problem, thereby preventing the application of appropriate treatment measures [4,10,15].

Furthermore, there is no connection between the subjective perception of UI and the actual severity of the condition, and physicians and patients may view the impact of UI on quality of life differently [19]. Whereas physicians focus more on functional impact, patients are more often concerned with their emotional well being and daily activities.

We noted that the greater the subjective disturbance caused by UI, the greater the likelihood of patients seeking medical advice and treatment. Apparently, when women perceive the urinary leakage as mild they fail to ask for medical advice, but when symptoms become intolerable they do so. Indeed, UI should be diagnosed and treatment planned according to both the objective and subjective severity of the condition.

The tendency of affected women, especially in traditional cultures, to hide the problem raises the question of whether it is up to the family physician to broach the subject. Gynecologic consultations are the most frequent in the Israeli system, perhaps because women here have more direct access to gynecologists, with no need for a referral from the family physician, but not to urologists. Experience has shown that even direct questioning of women about UI arouses very little response [6]. Robinson et al. [20] found that the question “Do you consider the accidental loss of urine a problem that interferes with your day-to-day activities or bothers you in other ways?” best correlates with standard questionnaires about quality of life and UI. Specific attention, especially in high risk populations, needs to be addressed to the problem and new methods sought to reveal it. A good rapport between patient and physician, and patient trust in the physician may encourage more women to discuss the problem.

HRT = hormone replacement therapy

In summary: UI is a common and often disturbing problem in women, but it does not receive appropriate attention. Although it can adversely affect the quality of life, only very few affected patients seek medical advice and treatment. By identifying the population at risk and raising the awareness of family physicians to the complaint, treatment can be made available to many more women.

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Correspondence: Dr. S. Vinker, P.O.Box 14238, Ashdod 77042, Israel.
Phone: (972-8) 854-4649, Fax: (972-8) 866-2205,
email: vinker01@inter.net.il