

Psychosocial problems of women with stress urinary incontinence

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Abstract

Objective. The aim of the study was evaluation of the influence of stress urinary incontinence on women's quality of life.

Material and method. The study covered 275 women between 30–65 years of age.

The study was conducted using the following tools: *Gaudenz Questionnaire*, *King's Health Questionnaire* (KHQ), *Female Sexual Function Index* (FIF) Questionnaire, and a questionnaire devised by the authors of the study.

Results. The study shows that the disease has a negative effect on evaluation of the quality of these women's lives. The symptoms of stress urinary incontinence had a significant influence on the feeling of emotional comfort, social and professional activity of the surveyed women – respectively $p=0.000$; $p=0.000$; $p=0.000$. Nearly every third woman (28.7%) felt great mental discomfort related to the disease symptoms, 31.7% a considerable discomfort, 33.1% a moderate, and very few women (6.5 %) claimed that the disease had a minimal effect on their emotional state. About two-thirds of the surveyed women (68.7%) were sexually active, and the remaining 31.3% declared the lack of sexual intercourse.

Conclusions. The occurrence of stress urinary incontinence symptoms affects the quality of life of women, especially their mental state and interpersonal contacts. Most women with the symptoms of stress urinary incontinence fulfill their sexual needs; however, many of them do not feel complete satisfaction with their sex life.

Key words

urinary incontinence, quality of life, sexual dysfunction

INTRODUCTION

Urinary incontinence has been recognized by the WHO to be one of the current and most important health problems. Statistics show that more than a third of women at mature age have the symptoms of the disease, and over a half of them suffer from stress urinary incontinence (*sui*) [1, 2, 3, 4].

The main *sui* risk factors include perinatal injury of the perineum, multiparity, inappropriate proceeding in puerperium, postpartum or post-operative, insufficient function of the constrictor muscle of the urethra, obesity and hard physical work, as well as the periods of menopause and senium [5, 6]. There occurs a secondary insufficient function of the urogenital diaphragm, which results in an involuntary outflow of urine during physical effort, coughing, sneezing, and laughing.

Urinary incontinence is not a serious disease which could lead to a life-threatening condition [3]. It is connected, however, with the necessity of modifying lifestyle, limiting the performance of some daily activities, constant protection (wearing of pads) in order to maintain body hygiene, overcoming of possible difficulties in relations with family and friends, changing of sexual activity, and sometimes changing of one's occupation [5, 7, 8].

Problems and limitations connected with *sui* symptoms are mainly subject to subjective evaluation. For this reason, it frequently happens that despite the same clinical picture,

women's complaints considerably differ, and some patients do not make any complaints at all [6, 8].

The aim of the study was to evaluate the effect of the degree of stress urinary incontinence on women's quality of life.

MATERIAL AND METHODS

The study was conducted from January 2011 – June 2012 in Lublin, Poland, in 3 randomly selected gynaecological centres specializing in the treatment of stress urinary incontinence. It covered 275 women who presented with urinary incontinence symptoms in one of the centres in the period of one year.

The criteria for including patients into the study group included:

- age below 65 years;
- involuntary losing of urine or occurrence of urinary incontinence episodes while coughing, laughing, sneezing or during other activities;
- giving consent to participate in the study.

From the study there were excluded women with neurological problems, mental diseases, congenital problems in the urogenital system and with symptoms indicating other types of urinary incontinence.

The study was conducted using the following tools:

- *Gaudenz questionnaire*, which was used to examine the women's control over the retention of urine.
- *King's Health Questionnaire* (KHQ) – for evaluation of the quality of life of women with urinary incontinence. This questionnaire was used to examine *sui* influence on a general perception of one's health, difficulties in

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performing professional functions and interpersonal contacts, mental state, and the occurrence of problems caused by the continuous wearing of pads, involuntary losing of urine, wetting of clothes, unpleasant smell, embarrassment (a feeling of shame).

- *Female Sexual Function Index* (FIFI) questionnaire – to evaluate sexual dysfunctions; was used to examine *sui* effects on sexual arousal disorders or lack of arousal, orgasm disorders, as well as disorders connected with pain, and also general satisfaction with sex life.
- The questionnaire devised by the study authors collected social and demographic data and the occurrence of chronic diseases.

In the study there was adopted the classification of stress urinary incontinence (*sui*) according to Stamey, which describes the advancement of clinical symptoms by means of the following 3 grades [9]:

- grade I – urine loss during considerable and sharp increase in intra-abdominal pressure in a standing position;
- grade II – involuntary urine loss during moderate increase in intra-abdominal pressure, e.g. connected with skipping, walking up or down stairs, light physical work;
- grade III – urine loss occurs continuously, even in a lying position, with very little or no effort at all.

Consequently, the respondents were divided into 3 groups. The *Sui* grade I group comprised women who declared that they lose urine in the amount of several drops, but this occurs rarely or sporadically while coughing, sneezing or laughing. Grade II group – included women who lose urine many times every day, in small amounts, while walking up and down the stairs and/or when jumping, skipping, or performing physical exercise. Grade III group – women who complained of constant loss of urine, in large amounts, while standing, sitting and lying.

Descriptive and statistical analyses of the study results were performed. χ^2 test of homogeneity or independence was used to evaluate the differences or relations between the analysed non-measurable parameters. For small group sizes (below 5), Yates's correction was used in the examined subgroups. There was adopted a 5% inference error and significance level of $p < 0.05$ associated with it, which indicated the existence of statistically significant differences or relations. Statistical analyses were conducted using software STATISTICA v. 7.1 (StatSoft, Poland).

RESULTS

The age of the examined women ranged between 30–65 years, with the majority aged between 41–50 years (123; 44.7%), followed by the group of women aged between 51–65 years (109; 36.7%), and finally, women aged between 30–40 (43; 15.6%). Grade I of urinary incontinence was diagnosed in 111 women (40.4%), grade II in 155 (56.4%), and grade III in 9 (3.2%). The relation between the respondents' age and grade of stress urinary incontinence is presented in Table 1.

The respondents' age was significantly associated ($p < 0.001$) with *sui* grade.

Perception of their own health state was described by the respondents in a 1–4 scale (very good, good, ordinary, bad). Nearly a half of the respondents (42.6%) evaluated their

Table 1. Respondents' age vs. *sui* grade

Respondents' age (in years)	<i>Sui</i> grade					
	One (I) n=111; 40.4%		Two (II) n=155; 56.4%		Three (III) n=9; 3.2%	
	n	%	n	%	n	%
30–40 n=43; 15.6%	29	26.1	14	9.0	0	0.0
41–50 n=123; 44.7%	53	47.7	67	43.2	3	33.3
51–65 n=109; 36.7%	29	26.2	74	47.8	6	66.7
Significance	$\chi^2=23.44$; $p = 0.000$					

state of health as good, 34.6% – ordinary, 21.5% – very good, and 1.5% – bad. The stress urinary incontinence grade did not have a significant effect ($p > 0.05$) on the respondents evaluation of their state of health.

The majority of the respondents (257; 93.5%) declared that *sui* caused a certain mental discomfort which was demonstrated by bad mood, and sometimes even depression. The degree of the experienced discomfort was described as high by 79 (28.7%) women, medium by 87 (31.7%) and as small by 91 (33.1%). The other 18 (6.5%) stated that the disease had a marginal or no effect on their emotional state. The degree of mental discomfort felt by the women in relation to *sui* grade is presented in Table 2.

Table 2. Perceived mental discomfort vs. *sui* grade

<i>Sui</i> grade	Degree of perceived mental discomfort							
	high n=79; 28.7%		medium n=87; 31.7%		small n=91; 33.1%		minimum/ none n=18; 6.5%	
	n	%	n	%	n	%	n	%
One (I) n = 111; 40.4%	7	6.3	28	25.2	59	53.2	17	15.3
Two (II) n = 155; 56.4%	66	42.7	56	36.1	32	20.7	1	0.7
Three (III) n = 9; 3.2%	6	66.7	3	33.3	0	0.0	0	0.0
Significance	$\chi^2 = 82.33$ $p = 0.0000$							

The intensity of the disease symptoms had a significant influence on the degree of mental discomfort demonstrated by bad mood, or depression felt by the respondents ($p < 0.01$).

Limiting of interpersonal contacts as a consequence of the occurrence of urinary incontinence symptoms was reported by 181 (65.8%) of the respondents, 21 (7.6%) of whom evaluated the degree of such limitations as high, 79 (28.5%) – medium, and 81 (29.2%) – small. The remaining 96 (34.6%) women stated that this was minimal, or they did not see any connection between their interpersonal contacts and the disease symptoms. The relation between the subjective evaluation of the degree of limiting of interpersonal contacts and *sui* grade is shown in Table 3.

The degree of limiting of interpersonal contacts was significantly associated with *sui* grade ($p < 0.01$).

During the period of the study, all the women were in employment, with 34 (12.4%) of them working only part-time. In the opinion of 145 (52.7%) women, the occurrence of *sui* symptoms made it difficult for them to perform their

Table 3. Degree of limiting of interpersonal contacts vs. *sui* grade

<i>Sui</i> grade	Degree of limiting of interpersonal contacts							
	high		medium		small		minimum/ none	
	n	%	n	%	n	%	n	%
One (I) n = 111; 40.4%	0	0.0	9	7.9	41	36.3	61	55.7
Two (II) n = 155; 56.4%	17	11.0	66	42.6	39	25.2	32	21.3
Three (III) n = 9; 3.2%	4	44.4	4	44.4	1	11.1	0	0.0
Significance	$\chi^2 = 84.75$ p= 0.0000							

jobs, and the remaining 130 (%) said that the symptoms had a marginal or no effect on their jobs. The relation between the evaluation of the degree of difficulties in professional life and *sui* grade is presented in Table 4.

Table 4. Evaluation of the degree of difficulties in professional life vs. *sui* grade

<i>Sui</i> grade	Degree of difficulties in professional life							
	high		medium		small		minimum/ none	
	n	%	n	%	n	%	n	%
One (I) n = 111; 40.4%	0	0.0	9	8.1	39	35.1	63	56.8
Two (II) n = 155; 56.4%	7	4.5	25	16.1	56	36.1	67	43.2
Three (III) n = 9; 3.2%	1	11.1	7	77.8	1	11.1	0	0.0
Significance	$\chi^2 = 42.57$ p= 0.0000							

The occurrence of difficulties in the respondents' professional lives was significantly associated ($p < 0.01$) with the grade of advancement of urinary incontinence clinical symptoms.

Continuous wearing of pads, wetting of clothes, unpleasant smell and inevitable feeling of embarrassment (feeling of shame) were the problems of more than a half (58.6%) of the surveyed patients with *sui* grades II and III, and for 37.6% with grade I. The relation between *sui* grade and the characteristics described above was significant ($p < 0.05$).

In the period of the study, sexual activity was confirmed by 68.7% women, and 31.3% respondents denied having any form of sex life. No statistically significant relation was found between the intensity of *sui* symptoms and sexual activity of the surveyed women ($p > 0.05$).

Of the 182 sexually active women, 158 (86.8%) admitted to having orgasms during sexual intercourse, 35 (19.2%) of whom always or nearly always reached orgasms, 37 (20.3%) in over a half of the intercourses; 43 (23.6%) in nearly a half of the intercourses; 43 (23.6%) in less than a half of the intercourses. The remaining 24 (13.2%) stated that they hardly ever or never had orgasms (Tab. 5).

Sui grade was significantly associated ($p < 0.05$) with the declared frequency of achieving orgasms in sexual intercourse.

The respondents evaluated their satisfaction with sex life differently: very satisfying sex life was reported by 36 (19.8%)

Table 5. *Sui* grade vs. frequency of reaching orgasm during sexual intercourse

<i>Sui</i> grade	Frequency of reaching orgasm									
	A		B		C		D		E	
	n	%	n	%	n	%	n	%	n	%
One (I) n = 79; 43.4%	17	21.5	21	26.6	17	21.5	19	24.1	5	6.3
Two (II) n = 98; 53.8%	18	18.4	16	16.3	25	25.5	23	23.5	16	16.3
Three (III) N = 5; 2.8%	0	0.0	0	0.0	1	20.0	1	20.0	3	60.0
Significance	$\chi^2 = 16.74$; p = 0.032927									

A – always or almost always; B – in more than a half of intercourses; C – in about a half of intercourses; D – in less than a half of intercourses; E – almost never or never

of the respondents, satisfying by 52 (28.6%), equally frequent satisfying and not satisfying intercourses were reported by 53 (29.1%) women, 27 (14.8%) women admitted to having little satisfaction from their sex life, and 14 (7.7%) were completely dissatisfied (Tab. 6).

Table 6. General satisfaction with sex life vs. *sui* grade

<i>Sui</i> grade	Sex life									
	A		B		C		D		E	
	n	%	n	%	n	%	n	%	n	%
One (I) n = 79; 43.4%	19	24.1	28	35.4	24	30.4	5	6.3	3	3.8
Two (II) n = 98; 53.8%	17	17.4	23	23.5	28	28.6	21	21.4	9	9.2
Three (III) N = 5; 2.8%	0	0.0	1	20.0	1	20.0	1	20.0	2	40.0
Significance	$\chi^2 = 19.97$; p = 0.0104334									

A – very satisfying; B – satisfying; C – equally frequently satisfying and not satisfying; D – slightly satisfying; E – not satisfying

A statistically significant relation was found between *sui* grade and satisfaction with sex life declared by the respondents ($p < 0.05$).

There was no significant relation between *sui* grade and the incidence of desire and arousal disorders or sexual disorders connected with pain – $p > 0.05$.

DISCUSSION

In accordance with the latest guidelines of the *International Continence Society* (ICS), a well-conducted interview based on standardized questionnaires [10, 11, 12, 13] allows determination of the character and intensity of clinical symptoms of urinary incontinence, and their influence on the psychosocial functioning of women.

Of all the questionnaires used in the study, the *Gaudenz* questionnaire may cause certain controversies [14, 15, 16]. Some authors claim that it should not be used as an independent tool for diagnosing urinary incontinence [15, 16]. Others, however, maintain that in basic level diagnostics an interview conducted by means of this questionnaire is

truly valuable [11, 14]. In the presented study, the *Gaudenz* questionnaire was only used to determine women's control over holding urine. The remaining two questionnaires used in the study, *King's Health* to evaluate women's quality of life, and *Female Sexual Function Index* for diagnosing sexual function disorders, have documented and unquestionable diagnostic value in their respective areas [12, 13].

Urinary incontinence is often associated with the ageing process of the organism and involuntional changes in urogenital organs caused by hypoestrogenism. Clinical experience implies, however, that urinary incontinence also occurs in a high percentage of younger women, including those in employment [1, 8, 17]. The conducted investigations confirm this fact.

The results show that urinary incontinence has an unquestionable influence both on the perception of a general quality of life and also the quality of sex life. Symptoms reported by patients, however, allow determination of the clinical grade of the disease in a highly objective manner. These observations are in accordance with the conclusions of other authors [1, 2, 18].

The studies by Bielicki et al. [18] evaluating the quality of life of women with *sui* discovered a significant relation ($p < 0.05$) between the degree of the symptoms clinical intensity, and the frequency of reporting particular life problems by the respondents. When ailments (urine loss) occurred sporadically, it did not disturb their normal functioning, but when the symptoms became more intense, they were also more troublesome to women and considerably limited their daily life activity. The results presented in the current study in a sense confirm the observations of other authors. The advancement of *sui* clinical symptoms significantly ($p < 0.05$) limited interpersonal contacts, impeded relations with family and friends, caused problems in professional life, and affected the emotional state of the surveyed women. It should be added that the degree of mental discomfort caused by *sui* symptoms was described with almost equal frequency as high, medium or small. Clinical grade of the disease had no significant effect on the subjective evaluation of general health state ($p > 0.05$).

In the group of surveyed women with *sui* symptoms of considerable intensity, there occurred changes in lifestyle, e.g. avoiding leaving home, social meetings, mainly in fear of becoming an object of ridicule. The biggest arduousness, however, was the necessity of wearing pads, to avoid wetting clothes. All of the above caused mental discomfort, which was admitted by the majority of the respondents with clinical grades II and III. Similar results were achieved by other authors [12, 18].

Sexuality is an integral part of human personality. The quality of this sphere of life acquires a special importance in the context of evaluation of sexual health, which combines biological, emotional, intellectual and social aspects of life [19, 20]. However, on the basis of the female sexual response model constructed by Basson, it can be concluded that psycho-emotional factors have a significant effect on satisfaction with sex life in women [21].

Urinary incontinence can lead to the occurrence of various consequences including a feeling of embarrassment, fear, concealing of this fact from the partner, and reducing sexual activity [17]. This can also contribute to avoiding sexual contacts, reducing the frequency of sexual intercourse, decrease in satisfaction with sex life and deterioration of

partnership relations [22]. In the presented study, the *sui* grade had a significant effect on the incidence of orgasm disorders and the women's general evaluation of satisfaction with sex life. Similar results were achieved by other authors [22, 23]. It was of no significance, however, in the questions of desire, arousal, sexual disorders connected with pain, which was not confirmed in the available literature [22, 24]. A review of the literature on the subject implies that sexual disorders occur in approximately 40% of women, and urological problems are the cause in only 5% of women seeking the help of sexologists [25]. Moreover, such disorders occur at different stages of the sexual response [2, 22, 23, 24].

The presented results show that *sui* has a negative influence on the social, psychological and economic aspects of women's quality of life. Despite the increasing importance of this problem, it still remains underrated and is often treated exclusively in terms of discomfort associated with the sphere of personal hygiene. Many women, especially those who are older, feel ashamed to tell a doctor about their problem, they suffer from it and bear various consequences. In such a situation it is necessary to modify the algorithm of proceeding with women who come for prophylactic tests and, most of all, to increase information and educational actions.

CONCLUSIONS

1. The occurrence of urinary incontinence symptoms has an influence on women's quality of life, especially their mental state and interpersonal contacts, and depends on the degree of the symptoms intensity.
2. The majority of women with urinary incontinence symptoms fulfil their sexual needs, although many of them feel reduced satisfaction with sexual intercourse.

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