

Urinary incontinence in women as a health and social problem

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Abstract

Purpose: Urinary incontinence is a disease due to which women have suffered for many centuries. But there is some optimistic side to the problem, too; such illnesses can be treated and prevented. The aim of the work was to evaluate the frequency of occurring such cases among women and to evaluate the chosen risk factors influencing this illness.

Material and methods: Results of studies carried through on 160 women in 2000 and 2001 at the 2nd Gynaecological Medical University of Łódź were presented here.

Results: A high frequency of urinary incontinence among the tested group was found. Almost every five respondent claimed to have had symptoms that would prove this illness.

Conclusions: Risk factors of occurrence of urinary incontinence among the patients were: birthweight over 4000 g, gynaecological or urological operations, big body mass and physical work were significant.

Key words: urinary incontinence, risk factors, frequency of occurring.

Introduction

According to the definition accepted in 1981 by ICS – International Continence Society – urinary incontinence is a state when involuntary urine leak through urethra makes it difficult for the patient to function in society, at the same time causing

problems with hygiene [1-3]. There may be several reasons for this situation. This state may accompany urological illnesses, gynaecological, neurological and also internal diseases. ICS established a division of urinary incontinence, depending on its etiology, including only the type of abnormality in operating of the lower urinary tract. According to the suggestions of ICS, there are five types of urinary incontinence. These are the following: stress urinary incontinence, urging urinary incontinence, reflexive urinary incontinence, urinary incontinence due to overflow and out of constrictor muscle urinary incontinence [4].

According to some authors, the stress urinary incontinence occurs almost only among women who delivered through the natural passage. Injuries that the inner organs, such as pelvis and perineal muscles were exposed to during a vaginal delivery, are main reasons of stress urinary incontinence. The number of deliveries is of lesser importance than the course of events. Long-lasting deliveries, especially the forceps childbirth, are a potential threat that this illness will take place [5].

To evaluate the frequency of occurring the phenomena of urinary incontinence in women and to test the influence of chosen risk factors on occurring of this illness.

Material and methods

There were 160 women tested throughout 8 months, that is from 10th October 2000 to 10th June 2001 at the 2nd Gynaecological Medical University of Łódź. An auditory survey was used here with 24 questions, 12 of which concerned women who had symptoms urinary incontinence. Correctly filled questionnaires were handed back by 159 people, that is 99.4%. Collected data was statistically treated, using descriptive methods and methods of statistic deduction. To describe the tested groups of respondents, there were structure indexes calculated. In the case of analysing small sub groups, the indexes were presented in the form of fraction (f) and for the other cases, they were

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Figure 1. Women under study with symptoms of urinary incontinence and without such symptoms according to the number of delivered children

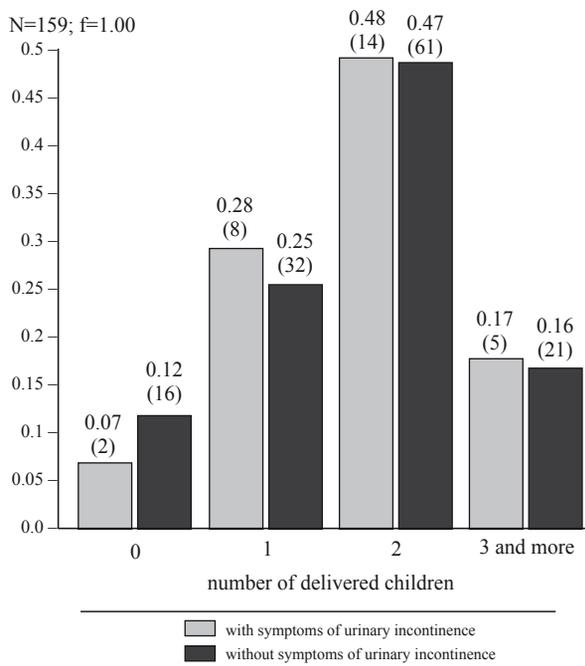
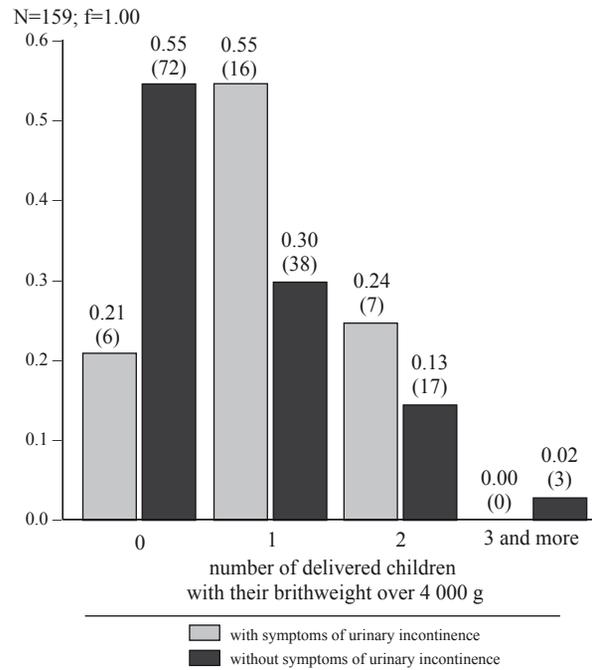


Figure 2. Women under study with symptoms of urinary incontinence and without such symptoms according to the number of delivered children with their birthweight over 4000 g



presented in percentage. Index of similarity of structures was used to measure the similarity of structures:

$$w_p = \sum_{i=1}^k \min(w_{1i}, w_{2i})$$

Results

In the group of 159 respondents, 29 women (18.2%) answered the questions included in the survey that would confirm the urinary incontinence and answers given by 130 of the tested women (81.8%) showed lack of such symptoms. Most of women among the questioned, that is 53 people (33.3%) were around 50-59 years of age, followed by a group of 44 people (27.7%) at the age of 30-39. Among 29 people with symptoms of urinary incontinence, the biggest part, which was 16 women ($f=0.55$) at the age of 50-59 years of age. Majority – 70 respondents (44.0%) had high school education, then primary school only or vocational education (34.0%). Among 29 people with symptoms of urinary incontinence, 16 women ($f=0.55$) had primary or vocational education. Majority of the tested women, that is 85 of them (53.5%) were the ones doing clerical work, and almost 40% of them were doing physical work. In the group of 29 women with the symptoms of urinary incontinence, there were 20 ($f=0.70$) who were doing physical work. From among 159 of them, 141 (88.7%) had vaginal gave birth to one or more children. Among women who had problems keeping urine, 14 of them ($f=0.48$) gave birth to two children (Fig. 1) but among those with symptoms of urinary incontinence, 16 women ($f=0.55$) gave birth to just one child

but with the birthweight over 4000 g (Fig. 2). The analysis was also made considering the body mass of the responding women. It turned out that among the tested patients, great majority of them, that is 107 people (67.4%) were normally built, 39 people (24.5%) were overweight, 12 women (7.5%) were obese and one tested person (0.6%) was with weight deficiency.

In the group of respondents with symptoms of urinary incontinence, 12 women ($f=0.41$) were overweight (Fig. 3). In the group of 159 tested women, 85 of them (53.5%) had neurological disorders or operations around the area of pelvis or backbone. In the above mentioned group majority, that is 61 (71.8%) have been through gynaecological or urological operations (11 women make 12.9%). In the group of women with symptoms of urinary incontinence, majority was made of those who have been through neurological illnesses and operations (22 people, $f=0.76$). In this group, 12 patients ($f=0.54$) had gynaecological operations (Fig. 4).

Discussion

The results of statistical analysis of the collected data showed that age of the tested had no influence on the symptoms of urinary incontinence. Problems with urinary incontinence were more frequent among women with primary and vocational education that among women with high school or higher education, but these differences are very little. The type of job had great influence on frequency of occurrence of the analysed disorder. There were differences within the groups of women tested according to their body mass (IBM index). Women after

Figure 3. Women under study with symptom of urinary incontinence and without such symptoms according to body mass

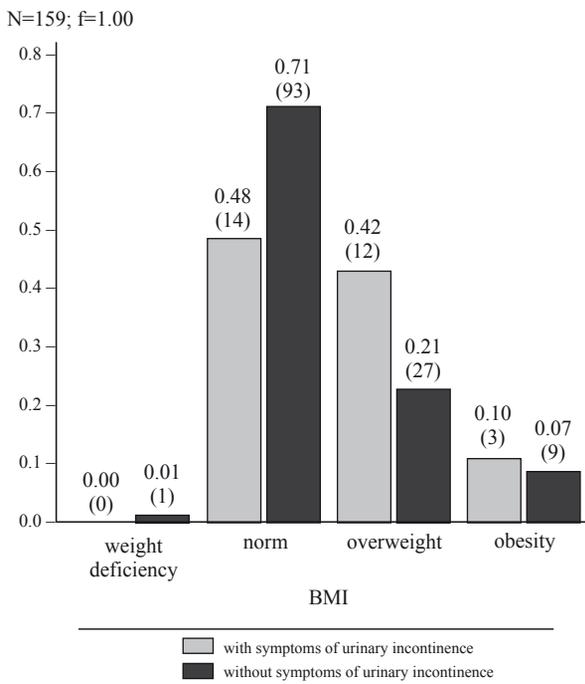
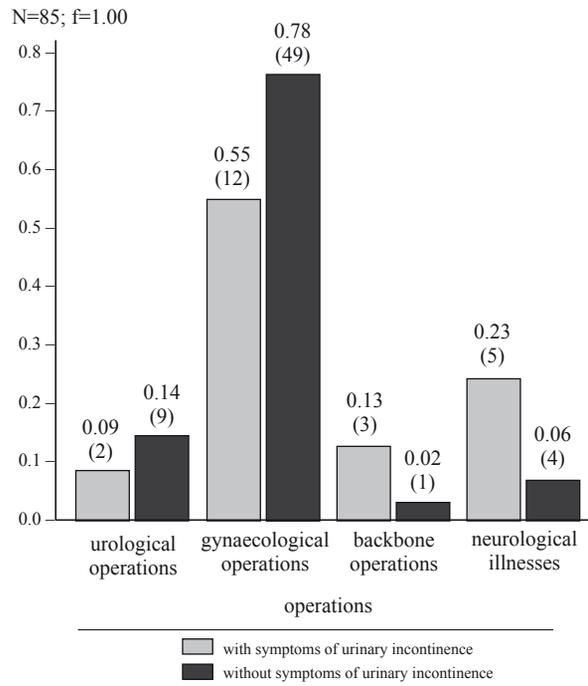


Figure 4. Women under study with symptoms of urinary incontinence and without such symptoms according to the neurological illnesses and operations performed



gynaecological and urological operations more frequently claimed to have had such symptoms in comparison with those who never had such operations.

Some women experience urinary incontinence a few tears after the delivery, especially before menopause. This is due to the hormone changes that take place in a woman's organism, mainly because of lowered tensity and flimsiness of the bottom of pelvis tissues. Any operations that were performed within the minor pelvis, especially extensive, such as hysterectomy may cause stress urinary incontinence. In such cases the direct cause of illness is lack of proper support for the basis of the bladder, the area of the trigone of the bladder and the nearer fragment of urethra on part of the neighbouring structures, which is at the same time the most inconvenient change of topographic relations among the parts of a minor pelvis.

Frequency of occurrence of urinary incontinence in women also depends on their life style. It is estimated that women who work physically professionally and additionally doing jobs that require lifting heavy weights, suffer from this illness much more often than their peers doing white-collar jobs or those who do not work at all. It has also been established that there are some differences between occurrence of urinary incontinence in women who live in the cities and those who live in the countryside. It is estimated that among women from urban areas, this illness occurs more often before their 50th birthday and among women from rural areas, after their 50th birthday. This difference is usually connected with the birthweight of the newborns and greater efficiency urogenital diaphragma among women living and raised in the countryside [6,7]. Among factors that are beneficial for urinary incontinence, there are also

chronic bronchitis connected with persistent coughing, constipation and obesity [8]. Among obese women, due to their weight and disappearance of flexible elements of tissues, a diaphragma flimsiness may take place, which leads to urinary incontinence. According to some publications, among the risk factors leading to urinary incontinence, there are also tract infection and taking certain medicines [9]. Among the physiological states that are beneficial for urinary incontinence, are the following: pregnancy, delivery and puerperium [10] and menopause [11-13]. Urinary incontinence is an illness that has made women suffer for many centuries. Frequency of occurring given by some authors ranges according to the tested population and method of its detection. In various works it is estimated that urinary incontinence occurs on average among 10-40% of women of different ages [14]. This data is probably lowered due to the fact that it is still a problem considered by many women as 'shameful' and only few of them go to the doctor with it. According to Gidian, this pathology touches around 10% of the whole population, occurs among 30% of women over 30 years of age and almost 60% of women over 50 years of age [15]. Epidemiological studies concerning occurrence of urinary incontinence carried through in the USA by Parnell in 1981 among 1000 women over 18 years of age showed that 22% of them have symptoms of stress urinary incontinence, urge urinary incontinence were observed among 9% of them and coexistence of the two was observed among 14% of the patients. Tomas et al. (1980), after having tested 22000 Londoners, showed urinary incontinence among 18% of women at the age of 25-64 and among 29% of those over 65 years of age [16]. Urinary incontinence is disease that ought to be prevented and if it occurs, it can be efficiently treated [17-19].

Conclusions

1. A high frequency of urinary incontinence among the study group was found.
2. Risk factors for urinary incontinence among the patients were: birthweight over 4000 g, gynaecological or urological operations, big body mass and physical work.
3. There is a need to carry out systematic preventive and educating actions among women, which would lead to lowering frequency of occurrence of urinary incontinence.

References

1. Bates P. First report of the standardization of terminology of lower urinary tract function. *Br J Urol*, 1976; 48: 39-42.
2. Górecki R. Operacyjne i zabiegowe metody leczenia nietrzymania moczu u kobiet. *Med Rodz*, 1999; 5: 5-9.
3. Praisner A. Nietrzymanie moczu u kobiet. *Diagnostyka i leczenie. Służba Zdrowia*, 2000; 20-21: 22-6.
4. Thuroff J. Diagnostyka różnicowa w urologii. PZWL Warszawa, 1998: pp. 234-47.
5. Czaplicki M, Bablok L. Leczenie nietrzymania moczu u kobiet. *Nowa Med*, 1997; 4: 28-30.
6. Czaplicki M, Bablok L. Leczenie nietrzymania moczu u kobiet. *Medipress Ginek*, 1997; 3: 6-12.
7. Koziorowski A, Murawski M, Cisło M. Wpływ regionu zamieszkania i rodzaju wykonywanej pracy oraz masy ciała na częstość występowania wysiłkowego nietrzymania moczu u kobiet. *Materiały Jubileuszowego Sympozjum Położniczo-Ginekologicznego*. Wrocław, 1995: 299-302.
8. Pietkiewicz A, Goluda M. Nietrzymanie moczu u kobiet – rola lekarza rodzinnego. *Pol Med Rodz*, 2000; 2: 131-4.
9. Rosenthal AJ, McMurtry CT. Nietrzymanie moczu u ludzi w podeszłym wieku. *Med po Dypl*, 1995; 4: 127-36.
10. Józwik M, Józwik M. Wpływ porodu drogami natury na czynność dolnego odcinka dróg moczowych oraz unerwienie dna miednicy – przegląd obecnego stanu wiedzy. *Nowa Med*, 2000; 5: 44-8.
11. Cardozo L. Zapalenie pęcherza moczowego po menopauzie. *BMJ Wyd Pol*, 1997; 5: 10.
12. Jakwicki. *Klimakterium*. Lublin, Wyd. Folium, 1995.
13. Warenik-Szymankiewicz A. Wpływ zmian hormonalnych na układ moczowo-płciowy w okresie menopauzy. *Med po Dypl*, 1997; 6 wyd. spec. wrzesień: 37-40.
14. Marks P, Surkont G, Rubersz-Adamska G. Nietrzymanie moczu u kobiet. *Gin Prakt*, 1997; 5: 27-33.
15. Gidian D. Problem nietrzymania moczu u dorosłych. *Med Rodz*, 2000; 9: 43-4.
16. McPherson A. *Problemy zdrowotne kobiet*. PWN Warszawa Springer, 1997.
17. Chapple CR, Arno P, Bosh JL. Solifenacin appears effective and well tolerated in patients with symptomatic idiopathic detrusor overactivity in a placebo – and tolterodine – controlled phase 2 dose – finding study. *BJU Int*, 2004; 93: 71-7.
18. Cardozo L, Lisek M, Millartd RI. Randomized, double – blind placebo controlled trial of the once daily antimuscarinic agent solifenacin succinate in patients with overactive bladder. *J Urol*, 2004; 172: 1919-24.
19. Haab F, Cardozo L, Chapple C. Long-term open-label solifenacin treatment associated with persistence with therapy in patients with overactive bladder syndrome. *Eur Urol*, 2005; 47: 376-84.