

Urinary retention in welfare and nursing home patients – a staff survey

(Zatrzymanie moczu u pacjentów zakładów pielęgnacyjno-opiekuńczych – badania ankietowe wśród personelu)

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Abstract – Introduction. Urinary retention is considered in urology as an emergency as it requires for the bladder to be quickly emptied and for the cause to be diagnosed as soon as possible. The knowledge of correct procedures in such conditions is a requirement towards all people who are to provide care to patients with a high risk of urinary retention. This risk increases with age, also in the case of the patients of welfare and nursing homes. Since this issue is currently very much around, the authors decided to undertake their own study.

Aim of the study. The aim of the study was to assess the level of welfare and nursing home staff's knowledge on the acute and partial urinary retention as well as the familiarity with therapeutic and preventive actions in those conditions.

Materials and methods. The study involved 100 employees of 5 randomly chosen welfare and nursing homes in the Mazowieckie, Małopolskie, and Podlaskie regions of Poland. The study group consisted of 56 women and 44 men aged 25 to 64. The method was a diagnostic poll and the research tool was a survey questionnaire.

Results and conclusions. The patients of welfare and nursing homes experience urinary retention relatively frequently as the characteristics of the group are the age over 65 and the dominance of women. The staff of welfare and nursing homes knows the causes, symptoms, and principles of operation related to urinary retention. The basic method of treating urinary retention is catheterisation. However, it is not common for the staff of welfare and nursing homes to know the principles of using catheters to empty a full bladder or the duration for which the catheter should remain in the bladder. The respondents also underline the in compliance with the regulation to perform preventive laboratory examinations in the cases of patients with the risk of urinary retention.

Key words - welfare and nursing homes, urinary retention, diagnostics and treatment, questionnaire study.

Streszczenie – Wstęp. Zatrzymanie moczu jest stanem nagłym w urologii i wymaga szybkiego opróżnienia pęcherza moczowego oraz ustalenia przyczyny. Znajomość właściwego postępowania w

tych stanach jest wymogiem stawianym wszystkim osobom opiekującym się chorymi z dużym ryzykiem zatrzymania moczu. Takie ryzyko wrasta wraz z wiekiem i dotyczy chorych leczonych w Zakładach Pielęgnacyjno-Opiekuńczych. Duża aktualność tematyki skłoniła autorów do podjęcia badań własnych.

Cel badań. Celem badania było określenie wśród pracowników Zakładów Pielęgnacyjno-Opiekuńczych wiedzy z zakresu przyczyn ostrego i przyległego zatrzymania moczu oraz znajomości działań terapeutycznych i profilaktycznych w tych stanach.

Materiał i metodyka. Badaniami objęto 100 pracowników, 5 losowo wybranych Zakładów Opiekunko-Leczniczych województwa mazowieckiego, małopolskiego i podlaskiego. W badanej grupie znalazło się 56 kobiet i 44 mężczyzn w wieku 25-64 lat. Metodą badań był sondaż diagnostyczny. Narzędzie stanowił autorski kwestionariusz ankiety.

Wyniki i wnioski. W Zakładach Pielęgnacyjno-Opiekuńczych stosunkowo często dochodzi do zatrzymania moczu, sprzyja temu wiek pacjentów powyżej 65.r.ż. i płeć żeńska. Personel Zakładów Pielęgnacyjno-Opiekuńczych zna przyczyny, objawy i zasady postępowania w przypadku zatrzymania moczu. Podstawową metodą leczenia zatrzymania moczu jest cewnikowanie. Personel Zakładów Pielęgnacyjno-Opiekuńczych najczęściej jednak nie zna prawidłowych zasad opróżniania przez cewnik przepelnionego pęcherza moczowego oraz czasu utrzymywania cewnika w pęcherzu moczowym. Respondenci podkreślają także brak przestrzegania zasady profilaktycznych badań laboratoryjnych u chorych zagrożonych zatrzymaniem moczu.

Słowa kluczowe - zakład pielęgnacyjno-opiekuńczy, zatrzymanie moczu, rozpoznanie i postępowanie, badania ankietowe.

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- B. Gathering and listing data
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I. INTRODUCTION

Welfare and nursing homes are places where senile patients are the most dominant group. This group is not homogenous. Its heterogeneity is an effect of both the idiosyncratic character of ageing and the occurrence of different diseases and ailments with different acuteness in different patients. What is more, with the increasing age, the psychosocial factor is of greater and greater significance. It is relevant for the occurrence and course of an illness (belonging to a group, interest with oneself, the sense of being useful for society)[1-7].

Welfare and nursing homes more and more frequently host patients with several ailments. The multitude of diseases makes it necessary for those institutions to have a therapeutic team available. The professionals forming those teams must be prepared for various medical emergencies, often related to the age of the patients – for instance, urinary retention [1-3,8]. Nevertheless, some authors such as Nauck F. or Alt-Epping B. claim that professionals caring for elderly patients are not prepared to implement therapeutic actions in case of urinary retention [8]. In order to check that, the authors of the present paper have undertaken a study of their own. Its aim was to assess welfare and nursing home employees' knowledge on acute and partial urinary retention and familiarity with therapeutic and preventive procedures in those conditions.

II. MATERIALS AND METHODS

Materials

The study involved 100 employees of 5 randomly chosen welfare and nursing homes in the Mazowieckie, Małopolskie, and Podlaskie regions of Poland. The study group consisted of 56 women and 44 men aged 25 to 64.

Methods

The method was a diagnostic poll and the research tool was an original survey questionnaire. The participation was random, voluntary, and anonymous. The study was conducted between March 1 and April 15, 2016.

III. RESULTS

The following paragraphs and tables present the distribution of the study group's responses.

Question: *How often do cases of urinary retention occur at your workplace?*

48% of the responders claimed the cases of urinary retention occurred *once a month*. 34% of them thought this was *more frequent than twice a month*, and 18% claimed the phenomenon occurred *twice a month*. The distribution of responses to this question is presented in table 1.

Table 1. The distribution of responses to the question: *How often do cases of urinary retention occur at your workplace?*

Available choices	Responses	
	Number	%
Once a month	48	48.0
Twice a month	18	18.0
More than twice a month	34	34.0
Overall	100	100.0

Question: *Do you know what acute and partial urinary retention consists in?*

67% of the responders claimed to know the difference between acute and partial urinary retention. The distribution of responses to this question is presented in table 2.

Table 2. The distribution of responses to the question: *Do you know what acute and partial urinary retention consists in?*

Available choices	Responses	
	Number	%
Yes	67	67.0
No	33	33.0
Overall	100	100.0

Question: *Do you think urinary retention is more frequent in men or women?*

68% of the responders thought the condition was more frequent in *women*, whereas 32% thought it was in *men*. The distribution of responses to this question is presented in table 3.

Table 3. The distribution of responses to the question: *Do you think urinary retention is more frequent in men or women?*

Available choices	Responses	
	Number	%
Women	68	68.0
Men	32	32.0
Overall	100	100.0

Question: *What age group you think is the most frequent to suffer from urinary retention?*

47% of the responders thought the most exposed age group was 75 and more. 45% claimed the age of 65-75 was the most frequent to experience the ailment. The distribution of responses to this question is presented in table 4.

Table 4. The distribution of responses to the question: *What age group you think is the most frequent to suffer from urinary retention?*

Available choices	Responses	
	Number	%
45-55	1	1.0
55-65	7	7.0
65-75	45	45.0
75 and more	47	47.0
Overall	100	100.0

Question: *What do you think is the underlying disease of urinary retention?*

While 74% of the responders thought the underlying disease of urinary retention was *kidney failure*, 16% claimed

it was *prostate enlargement*. The distribution of responses to this question is presented in table 5.

Table 5. The distribution of responses to the question: *What do you think is the underlying disease of urinary retention?*

Available choices	Responses	
	Number	%
Dementia	8	8.0
Alzheimer's disease	1	1.0
Kidney failure	74	74.0
Prostate enlargement	16	16.0
Spinal cord injuries	1	1.0
Overall	100	100.0

Question: *Which of these do you think are likely to lead to urinary retention? (checkboxes selection)*

36.2% of the responses indicated that *age* is the most pre-defining factor for urinary retention. 27.7% claimed it was *prostate enlargement* and 20.7% pointed to *urinary tract infections*. The distribution of responses to this question is presented in table 6.

Table 6. The distribution of responses to the question: *Which of these do you think are most likely to lead to urinary retention? (checkboxes selection)*

Available choices	Responses	
	Number	%
Age	68	36.2
Prostate enlargement	52	27.7
Urinary tract infections	29	15.4
Kidney failure	39	20.7
Overall	188	100.0

Question: *Which of these symptoms you think are the most frequently related to urinary retention? (checkboxes selection)*

33% claimed the most common symptom accompanying urinary retention is *lower abdominal pain*. 28% claimed it was *full bladder palpable in physical examination*. 19.3% underlined *urinary urgency with co-existent micturition inability*. The distribution of responses to this question is presented in table 7.

Table 7. The distribution of responses to the question: *Which of these symptoms you think are the most frequently related to urinary retention?* (checkboxes selection)

Available choices	Responses	
	Number	%
Lower abdominal pain	72	33.0
Urinary urgency with co-existent micturition inability	42	19.3
Full bladder palpable in physical examination	61	28.0
Consciousness disorders	17	7.8
Haematuria	26	11.9
Overall	218	100.0

Question: *Do you think the patients exposed to urinary retention at your workplace undergo periodical blood tests?*

75% of the respondents claimed that the patients who are a risk group of urinary retention have their blood tested periodically at their mother institution. The distribution of responses to this question is presented in table 8.

Table 8. The distribution of responses to the question: *Do you think the patients exposed to urinary retention at your workplace undergo periodical blood tests?*

Available choices	Responses	
	Number	%
Yes	75	75.0
No	25	25.0
Overall	100	100.0

Question: *Do you think the patients exposed to urinary retention at your workplace undergo periodical urianalysis?*

70% of the respondents claimed the patients at their institution undergo a periodical urianalysis. The distribution of responses to this question is presented in table 9.

Table 9. The distribution of responses to the question: *Do you think the patients exposed to urinary retention at your workplace undergo periodical urianalysis?*

Available choices	Responses	
	Number	%
Yes	70	70.0
No	30	30.0
Overall	100	100.0

Question: *Do you think the patients exposed to urinary retention at your workplace undergo periodical urinary system ultrasound?*

31% of the respondents claimed the patients at their institution undergo a periodical urinary system ultrasound. The distribution of responses to this question is presented in table 10.

Table 10. The distribution of responses to the question: *Do you think the patients exposed to urinary retention at your workplace undergo periodical urinary system ultrasound?*

Available choices	Responses	
	Number	%
Yes	31	31.0
No	69	69.0
Overall	100	100.0

Question: *Who do you think is the most common staff member to catheterise a patient?*

99% of the respondents believed it was a nurse to catheterise patients most frequently. The distribution of responses to this question is presented in table 11.

Table 11. The distribution of responses to the question: *Who do you think is the most common staff member to catheterise a patient?*

Available choices	Responses	
	Number	%
Doctor	1	1.0
Nurse	99	99.0
Overall	100	100.0

Question: *How a catheterised patient's bladder should be emptied?*

83% of the respondents would empty a catheterised patient's bladder *directly at once*. The distribution of responses to this question is presented in table 12.

Table 12. The distribution of responses to the question: *How a catheterised patient's bladder should be emptied?*

Available choices	Responses	
	Number	%
In fractions	17	17.0
Directly at once	83	83.0
Overall	100	100.0

Question: *In case catheterisation is impossible, is a cystostomy performed at your facility?*

100% of the respondents claimed that if it is impossible to catheterise a sick patient, no attempts of cystostomy are made. The distribution of responses to this question is presented in table 13.

Table 13. The distribution of responses to the question: *In case catheterisation is impossible, is a cystostomy performed at your facility?*

Available choices	Responses	
	Number	%
Yes	0	0
No	100	100.0
Overall	100	100.0

Question: *In your opinion, what is the usual duration for which a catheter remains in place after catheterisation?*

45% of respondents claimed that, once a patient is catheterised because of urinary retention, the catheter remains in place for up to 21 days. 42% claimed the duration was up to 14 days. A shorter time is applied significantly less frequently. The distribution of responses to this question is presented in table 13.

Table 13. The distribution of responses to the question: *In your opinion, what is the usual duration for which a catheter remains in place after catheterisation?*

Available choices	Responses	
	Number	%
1-3 days	2	2.0
Up to 7 days	9	9.0
Up to 14 days	42	42.0
Up to 21 days	45	45.0
Overall	98	98.0

Question: *Are there any other methods beside catheterisation that are applied to treat urinary retention at your workplace?*

89% of the respondents claimed that catheterisation was the only urinary retention treatment method applied at their facility. The distribution of responses to this question is presented in table 14.

Table 14. The distribution of responses to the question: *Are there any other methods beside catheterisation that are applied to treat urinary retention at your workplace?*

Available choices	Responses	
	Number	%
Yes	8	8.0
No	89	89.0
Overall	97	97.0

Question: *In your opinion, what is the duration after which the relapse of urinary retention occurs?*

39% of the respondents claimed the disease is most likely to return after 3-6 months, whereas 32% thought it was closer to 2 months. 18% believed the relapse was most frequent after 1 month. The distribution of responses to this question is presented in table 13.

Table 15. The distribution of responses to the question: *In your opinion, what is the duration after which the relapse of urinary retention occurs?*

Available choices	Responses	
	Number	%
1 month	18	18.0
2 months	32	32.0
3-6 months	39	39.0
Over 6 months	3	3.0
Overall	92	92.0

Question: *In your opinion, are the methods of treating urinary retention at your workplace effective?*

86% of the respondents claimed the urinary retention treatment methods applied at their workplace are not effective. The distribution of responses to this question is presented in table 16.

Table 16. The distribution of responses to the question: *In your opinion, are the methods of treating urinary retention at your workplace effective?*

Available choices	Responses	
	Number	%
Yes	12	12.0
No	86	86.0
Overall	98	98.0

Question: *How often do you think the patients with urinary retention at your workplace require hospitalisation?*

76% of the respondents claimed that patients with urinary retention require hospitalisation *rarely* or *very rarely*. The distribution of responses to this question is presented in table 17.

Table 17. The distribution of responses to the question:
How often do you think the patients with urinary retention at your workplace require hospitalisation?

Available choices	Responses	
	Number	%
Very rarely	21	21.0
Rarely	55	55.0
Often	8	8.0
Very often	7	7.0
Always	10	10.0
Overall	100	100.0

IV. DISCUSSION

The authors' own study indicates that the incidence of urinary retention in patients of welfare and nursing homes is high. According to 68% of the respondents, it is more frequent in women than in men. A similar number of respondents claim the most exposed age groups are 65-75 and over 75. These observations are not in line with multiple studies which indicate that urinary retention is an ailment most frequently experienced by older men [1-4]. According to 48% respondents, urinary retention occurs *once a month*, whereas the others thought it occurred *two or more times a month*.

Among the causes that may be predefining for urinary retention, the surveyed staff pointed to the *age* of the patient (36.2%), *prostate enlargement* (27.7%) and *urinary tract infections* (20.7%).

The respondents' opinions are fully supported by many professional studies [1-3,8]. For it is often emphasised that the older the patient, the bigger the risk of acute kidney failure. It poses a threat to patients who are undergoing treatment using many medications, and who are dehydrated. Another predefining factor is related to the changes and lesions affecting the organs after 40 years of age, such as fibrosis, glomerulosclerosis, vascular lesions impairing the renal blood supply, gradually deteriorating autonomous nervous system disorders, the impairment of renal flow automatic regulation, the decrease in glomerular filtration by approximately 1 ml per minute per year, and the decrease in the ability to retain water and sodium and re-

moving acids from the system. Thus, old age is often the factor of exposure to acute kidney damage or chronic kidney illness, which may lead to serious kidney failure [8,9]. The leading factor accompanying urinary retention was considered to be *lower abdominal pain* (33%), whereas 28% pointed to a *full bladder* palpable in a physical examination. 19.3% underlined *urinary urgency accompanied by inability to urinate*.

A positive observation is the one that 75% of the respondents know and appreciate the need for a *periodical blood test* in patients with urinary retention risk. What is more, 70% feel the same way about urinalysis. What is worrying, though, is that at the institutions where the study was conducted, 69% of respondents claim that patients with urinary retention risk are never subjected to those periodical examinations (of blood and urine).

The most common therapeutic treatment of urinary retention in the respondents' mother facilities is catheterisation. After this procedure is performed, as many as 83% of the respondents would empty the bladder all at once (without fractioning the urine). 89% of the surveyed professionals considered catheterisation to be the only available treatment method at their workplace, and 86% of them believed the urinary retention treatment implemented at their facilities is *ineffective*. Nevertheless, 76% of the responders claimed that urinary retention patients need hospitalisation *rarely* or *very rarely*.

45% of the respondents claimed that after catheterisation, the catheter should remain in the bladder for *up to 21 days*. 42% thought it was *up to 14 days*. Shorter time of catheter application is applied definitely less frequently. 39% of respondents believed the urinary retention relapse to be the most frequent after *3-6 months*, whereas 32% thought it was *2 months*, and 18% - *a month*.

V. CONCLUSIONS

- The patients of welfare and nursing homes often experience urinary retention, which is to some extent caused by their age over 65 and the dominance of women.
- The staff of welfare and nursing homes is familiar with causes, symptoms, and medical procedures in cases of urinary retention.
- The basic method of urinary retention treatment is catheterisation.

- The personnel of welfare and nursing homes is more often than not unaware of the principles of correct full bladder emptying using a catheter and of the proper duration for which a catheter should remain in the bladder.
- The respondents also underline the fact that the principle of subjecting those in the urinary retention risk group to preventive laboratory tests is not observed.

VI. REFERENCES

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