

# Prevalence of Overactive Bladder Among Nurses at Siriraj Hospital

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## Abstract

**Objective** : To determine the prevalence of overactive bladder among nurses at Siriraj Hospital.

**Study Design** : Descriptive study.

**Subjects** : 300 nurses working at Siriraj Hospital.

**Intervention** : Each subject was randomly selected and interviewed regarding symptoms of overactive bladder using a standardized questionnaire.

**Results** : Of 300 nurses included in this study, the prevalence of overactive bladder was 21.3% (95% CI 16.9-26.5). Urgency, the main symptom, was found to occur in 32.8%. The common associated symptoms were frequency and urge incontinence which were found in 23.4% and 11.4% respectively.

Concerning the impact of the disease on various aspects of quality of life, we found there was no effect in 40-95% of cases, in 4-50% there was a moderate effect and a strong effect on the quality of life in 0-12%. Surprisingly, only 10.9% of affected subjects had sought medical treatment for their symptoms. The remaining women appeared unconcerned by their problems.

**Conclusion** : The prevalence of overactive bladder among nurses working at Siriraj Hospital was 21.3% which was very high. However, only a few cases sought medical help. This study provides baseline information concerning this condition in Thai women. Promotion of knowledge and awareness of this condition should be provided, as well as further research concerning various aspects should be conducted, in order to assess how interaction might improve the quality of life of affected women.

**Key words** : Overactive bladder, Prevalence, Nurses, Quality of life

**เรื่องย่อ** : ความชุกของภาวะกระเพาะปัสสาวะไวเกินในพยาบาลโรงพยาบาลศิริราช  
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**วัตถุประสงค์** : เพื่อหาความชุกของภาวะกระเพาะปัสสาวะไวเกินในพยาบาลโรงพยาบาลศิริราช

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**กลุ่มตัวอย่าง** : พยาบาลหญิงที่ปฏิบัติงานในโรงพยาบาลศิริราช ระหว่างวันที่ 1 ธันวาคม 2544 ถึง 31 มีนาคม 2545 จำนวน 300 คน

**การกระทำ** : สัมภาษณ์พยาบาลหญิงโรงพยาบาลศิริราชในหอผู้ป่วยต่าง ๆ โดยใช้แบบสอบถามเกี่ยวกับการขับถ่ายปัสสาวะที่ออกแบบขึ้นและได้ผ่านการทดสอบแล้ว

**ผลการวิจัย** : ความชุกของภาวะกระเพาะปัสสาวะไวเกินในพยาบาลหญิงที่ปฏิบัติงานในโรงพยาบาลศิริราช พบได้ร้อยละ 21.3 โดยพบอาการ urgency เพียงอย่างเดียวร้อยละ 32.8 ส่วนอาการร่วมที่พบได้บ่อยคือ frequency และ urge incontinence ซึ่งพบได้ร้อยละ 23.4 และ 11.4 ตามลำดับ ผลกระทบของภาวะกระเพาะปัสสาวะไวเกินต่อการดำเนินชีวิตประจำวันในด้านต่าง ๆ พบว่าประมาณร้อยละ 40-95 ไม่มีผลกระทบใด ๆ มีประมาณร้อยละ 4 - 50 ที่มีผลกระทบทำให้มีข้อจำกัดในการดำเนินชีวิตประจำวันบางอย่าง เช่น การออกนอกบ้าน การเดินทางที่ใช้เวลามากกว่า 30 นาที และปัญหาทางจิตใจ ส่วนผู้ที่มีผลกระทบอย่างมากมีเพียงร้อยละ 0 - 12 การศึกษานี้ยังพบว่าผู้ป่วยเพียงร้อยละ 10.9 ที่มีการรักษาโรคนี้ ส่วนใหญ่ไม่ได้รับการรักษาเนื่องจากไม่คิดว่ามีปัญหาหรือไม่มีผลต่อการดำเนินชีวิตประจำวัน

**สรุป** : ความชุกของภาวะกระเพาะปัสสาวะไวเกินในพยาบาลหญิงโรงพยาบาลศิริราชพบได้ร้อยละ 21.3 ซึ่งค่อนข้างสูงและมีผลต่อการดำเนินชีวิตประจำวันบางอย่าง แต่ผู้ที่มีภาวะดังกล่าวยังได้รับการดูแลรักษาเป็นส่วนใหญ่เนื่องจากยังไม่คิดว่าเป็นปัญหา ข้อมูลที่ได้จากการศึกษานี้เป็นเพียงข้อมูลพื้นฐานของภาวะกระเพาะปัสสาวะไวเกินในสตรีไทย การให้ความรู้และกระตุ้นให้เกิดความตื่นตัวในเรื่องนี้เป็นเรื่องที่ต้องกระทำอย่างยั่งยืน นอกจากนี้การทำวิจัยในแง่มุมอื่นก็ควรได้รับการสนับสนุน เพื่อช่วยพัฒนาคุณภาพชีวิตของสตรีไทยต่อไป

## INTRODUCTION

Overactive bladder is defined as the patient with the symptoms of urgency, with or without urge incontinence and usually associated with frequency of urination and nocturia.<sup>1</sup> This condition is classified as a chronic disease which is found in all age groups of women and tends to increase with age. Although overactive bladder is not a severe condition or a life threatening disease, the discomfort, anxiety, shame and loss of confidence that result from this chronic condition may affect their daily, social and sexual behavior.<sup>2-4</sup> Moreover, the cost of this disease has increased by 250% over the last 10 years in America.<sup>5</sup>

A recent study<sup>6</sup> showed that many factors including age, parity, obesity, contraception, gynecologic operation, menopause, alcohol consumption and some diseases, i.e., neurological disease and diabetes mellitus have an influence on an overactive bladder.

Some studies<sup>4,7</sup> have reported a prevalence of overactive bladder of 16 to 54%. The difference in the figures might be due to the differences in the age of the population studied, the methodology used, and interpersonal variability, i.e., acceptance of the disease. A major problem is the criteria used to diagnose overactive bladder which is still being debated. However, The International Continence Society has defined the criteria to diagnose overactive bladder in 2001.<sup>1</sup>

In Thailand, studies of the prevalence of overactive bladder are rare.<sup>8</sup> Therefore, we wanted to study the prevalence of overactive bladder using the diagnostic criteria of the International Continence Society which uses only symptoms for diagnosis.<sup>1</sup> Moreover, the effect of overactive bladder on the women's quality of life and the way the women managed themselves were also studied. The results of this study may provide baseline data for further studies.



Nurses at Siriraj Hospital were the target group of this study because of the large number of women and whose environment might cause difficulty in voiding. Moreover, ease of the communication and background medical knowledge might increase the accuracy of this data.

The objective of the study was to determine the prevalence of overactive bladder among nurses at Siriraj Hospital and the effects of the disease on their quality of life, self care, the results of treatment and satisfaction with treatment.

## MATERIALS AND METHODS

300 nurses working at Siriraj Hospital during the period from December 1, 2001 to March 31, 2002 were recruited into this study. Those who were pregnant or who had medical diseases affecting urination such as diabetes mellitus, neurologic diseases, concurrent use of medication affecting urination or who refused to take part in the study were excluded.

The subjects were then randomly selected from all the nurses at Siriraj Hospital by using the lists provided by the office of the hospital director. All of them were interviewed using a standardized questionnaire which was already tested by 4 well-trained research assistants.

### Data analysis

The data were analyzed using descriptive statistical analysis which were gave numbers, percentages, means, standard deviation, ranges and 95% confidence interval.

## RESULTS

From this study the mean age of the subjects was  $34.77 \pm 9.47$  years (with a range of 18-58). The number of single women was 166 (53.3%). The number who had had a previous vaginal delivery was 20.3% and most of them had had no serious medical illnesses (85%).

Table 1. The prevalence of the types of symptom.

Types of symptom	Numbers (percentage)	95% CI
Overactive bladder	64 (21.3)	16.9 - 26.5
Mixed incontinence	22 (7.3)	4.8 - 11.0
Stress incontinence	20 (6.6)	4.21 - 10.3

Among 300 nurses in this study, the prevalence of overactive bladder was 21.3% (with 95% CI of 16.9 - 26.5), those of mixed incontinence and stress incontinence were 7.3% and 6.6% respectively as shown in Table 1.

Urgency, the main symptom, was found in 32.8%. The common associated symptoms were frequency and urge incontinence which were found in 23.4% and 11.4% respectively. Other symptoms are shown in Table 2.

The study of the effect of overactive bladder

on daily life showed that most people experienced no effect or some limitation to daily life outside work, over a 30-minute journey, and a psychiatric problem as shown in Table 3.

Only 7 cases (10.9%) performed self care, 3 were treated by urologist, 2 by a general practitioner and 1 gave self treatment. The results of treatment were improvement in 6 cases and 1 still had symptoms.

Six cases were satisfied with the results of treatment while 1 case was not.

Table 2. Associated symptoms in those with an overactive bladder.

Symptoms	Numbers (percentage)	95% CI
Urgency alone	21 (32.8)	21.9 - 45.8
Urgency + Frequency	15 (23.4)	14.1 - 35.9
Urgency + Nocturia	6 (9.4)	3.9 - 19.9
Urgency + Frequency + Nocturia	6 (9.4)	3.9 - 19.9
Urgency + Frequency + Nocturia + Urge incontinence	5 (7.8)	1.9 - 18.0
Urgency + Urge incontinence	9 (11.4)	7.0 - 25.5
Urgency + Frequency + Urge incontinence	2 (3.1)	0.6 - 11.8

Table 3. The effect of overactive bladder on daily life (64 people).

Aspects	No effect (%)	Moderate effect (%)	Strong effect (%)
Outside work	26 (40.6)	32 (50.0)	6 (9.4)
Over 30 minutes of journey	32 (50.0)	24 (37.5)	8 (12.5)
Psychiatric problem	43 (67.2)	20 (31.2)	1 (1.6)
Housework	45 (70.3)	18 (28.1)	1 (1.6)
Exercise	50 (78.1)	12 (18.8)	2 (3.1)
Sleep	35 (54.7)	25 (39.1)	4 (6.2)
Sexual problem	61 (95.3)	3 (4.7)	0 (0.0)

Table 4. The methods of self care (can select more than 1 answer, 57 people).

Methods	Number of cases (percentage)
No definite method of self care	34 (59.6)
Low intake of water	15 (26.3)
Ask for toilet when stay outside the home	15 (26.3)
Changing underwear	10 (17.5)
Avoid long time of traveling	9 (15.8)

Table 5. The reasons that the patients did not receive treatment.

Reasons	Number of cases (percentage)
Not concerned by this problem	51 (89.4)
No time	3 (5.3)
Embarrassed to consult a doctor	3 (5.3)



57 cases (89.1%), who didn't receive any treatment had many methods of self care including no definite method of self care (59.6%), low intake of water (26.3%), and ask for toilet when they stayed outside the home (26.3%) as shown in Table 4.

Most cases were unconcerned by this problem (89.4%) as shown in Table 5.

## DISCUSSION

Overactive bladder is a common disease with the prevalence of 16-54% in Asian and Europeans.<sup>4,7</sup> There has been no definite study of the prevalence of this disease in Thailand, therefore the authors intended to study this aspect. A cross-sectional study was performed among the nurses in Siriraj Hospital whose work might produce unusual patterns of urination. Moreover, the nurses could answer the questionnaire correctly which improved the accuracy of the data collected.

The definition of overactive bladder of the International Continence Society, 2001<sup>1</sup>, was used because it is popular and accepted. According to the definition, only patient symptoms are used to diagnose the disease and recruit patients.

The duration of symptoms is not defined in the definition, therefore the authors used a duration of 6 months of symptoms to define the diagnosis.

From this study, the prevalence of overactive bladder among nurses at Siriraj Hospital is 21.3% which is different from other studies<sup>4,7,8</sup>. The different criteria used for diagnosis<sup>9</sup> is likely to be responsible for the difference in prevalence of the disease. The mean age of the patients was 34.77 years old which was lower than those of the patients in other studies, i.e., over 75 years old in Milsom's study<sup>6</sup> and 50-60 years old in Harrison's study<sup>10</sup>. The patients in this study were younger.

An overactive bladder was the most common symptom with a prevalence of 21.3%. Stress and mixed incontinences had a prevalence of 6.6% and 7.3% respectively. The study patients were young and only 20.3% had had a vaginal delivery and therefore the prevalence of stress and mixed incontinences were found to be low. The different results in the study of Samuelsson<sup>11</sup> and Vaart<sup>12</sup> which found a prevalence of overactive bladder of 2.1%

and 12% respectively were due to different criteria used.

The International Continence Society has defined "urgency" to be an important symptom for the differential diagnosis and the other symptoms including frequency and urge incontinence to be minor clues for accurate diagnosis. From this study, frequency and urge incontinence were found to be 23.4% and 11.4% respectively which corresponded to the study of Lapitan<sup>4</sup>.

From this study, the effect of overactive bladder on daily life was small; most people experienced few effects on physical work including house work, exercise and sleep. Most nurses were single, stayed in the dormitory and had definite working hours. As to social aspects, most people experienced no effect or some limitations on social life which included an effect when traveling for longer than 30 minutes and sexual relationships. This can be explained by the fact that the group studied had short travelling times and adequate toilets in the hospital.

From this study, only 10.9% practiced self care which is similar to previous studies.<sup>4,10,13</sup> Most patients believed that they had no disease but just abnormal urination. Most of them were treated by urologists and a few people were treated by a general practitioner because they worried about a vaginal examination. The results of treatment were that most experienced an improvement in their symptoms.

For the self-care group, 59.6% had no definite method for caring for themselves. Some people (17-26%) tried to change their behavior including low intake of water, changing underwear and avoiding traveling for a long period. This may be explained by the fact that the study group experienced few effects of the condition, were well educated, and were embarrassed to consult a doctor about it.

In conclusion, overactive bladder is a common condition that affects the physical and social activities of those affected. The disease can be cured and the results are mostly satisfactory. However, some patients still have no treatment and self-care. Knowledge about overactive bladder should be promoted in order to help patients cope and reduce unnecessary inconvenience and suffering.



## REFERENCES

1. Abrams P, Cardozo L, Fall M. The standardization of terminology of lower urinary tract function: report from the standardization sub-committee of international continence society. *Neurourol and Urodyn* 2002; **21**: 167-78.
2. Liberman JN, Hunt TL, Stewart WF. Health-related quality of life among adults with symptoms of overactive bladder: results from a U.S. community-base survey. *Urology* 2001; **57**: 1044-50.
3. Hagglund D, Walker-Engstrom ML, Larsson G. Quality of life and seeking help in women with urinary incontinence. *Acta Obstet Gynecol Scand* 2001; **80**: 1051-55.
4. Lapitan MC, Chye PLH. The epidemiology of overactive bladder among females in Asia: a questionnaire survey. *Int Urogynecol J* 2001; **12**: 226-31.
5. Wilson L, Brown JS, Shin GP. Annual direct cost of urinary incontinence. *Obstet Gynecol* 2001; **98**: 398-406.
6. Milsom I, Stewart W, Thuroff J. The prevalence of overactive bladder. *Am J Managed Care* 2000; **6** (Suppl 11): 565-73.
7. Milsom I, Abrams P, Cardozo L. How widespread are the symptoms of an overactive bladder and how are they managed? A population-based prevalence study. *Br J Urol Int* 2001; **8**: 460-66.
8. Titapant V, Tanprasert P. Prevalence of urinary incontinence in natural menopausal women at Siriraj Hospital. *Siriraj Hosp Gaz* 2000; **52**: 516-23.
9. Thom D. Variation in estimates of urinary incontinence prevalence in the community: effect of differences in definition, population characteristics, and study type. *J Am Geriatr Soc* 1998; **46**: 473-80.
10. Harrison GL, Memel DS. Urinary incontinence in women : its prevalence and its management in a health promotion clinic. *Br J Gen Pract* 1994; **44**: 149-52.
11. Samuelsson E, Victor A, Svardudd K. Determinants of urinary incontinence in a population of young and middle-aged women. *Acta Obstet Gynecol Scand* 2000; **79**: 208-15.
12. Vaart CH, Leeuw JR, Heintz AP. The effect of urinary incontinence and overactive bladder symptoms on quality of life in young women. *Br J Urol Int* 2002; **90**: 544-59.
13. Ricci JA, Baggish JS, Hunt TL. Coping strategies and health care-seeking behavior in US national sample of adults with symptoms suggestive of overactive bladder. *Clin Ther* 2001; **23**: 1245-59.