

■ **Original Article**

Prevalence of urinary incontinence among gynecological admissions at tertiary care hospital in eastern Nepal

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Abstract

Background: Urinary incontinence is a common medical disorder. However, in the developing countries the problem is not accepted as a major health problem. **Objectives:** To find out the prevalence of urinary incontinence in institutionalized gynecology patients at BPKIHS and to assess the severity of incontinence and to find out its perception as health problem. **Methods:** All the patients aged more than 20 years and excluding pregnancy related admissions during the study period of one year (February 2005 to February 2006) were questioned with preformed questionnaire and responses were noted. All together 630 patients participated. **Results:** 50.6% had incontinence. Urge incontinence was more common type (60%) than stress incontinence (40%). Most of the patients did not consider it as a health problem. **Conclusion:** Urinary leakage is highly prevalent and should be regarded as potential health problem.

Keywords: incontinence; urge, stress

Introduction

According to the International Continence Society (ICS), Urinary Incontinence as a medical disorder is a condition in which involuntary loss of urine is a social or hygienic problem to the patient and is objectively demonstrable.¹

Urinary incontinence is a common medical disorder. In United States, an estimated 13 million adult experience significant involuntary loss.² The precise prevalence of urinary incontinence is difficult to estimate. Part of the difficulty has been in defining the degree, quantity, and frequency of urine loss necessary to qualify as pathologic. The relative importance attributed to urinary incontinence as a medical and social problem is increasing. In 1989, the National Institutes of Health Consensus Development conference estimated the annual cost of urinary incontinence in the United States to be \$12.4 billion.³ As a direct result, the public is becoming more aware of the problem and more active and educated about incontinence. There has been increased awareness throughout the developed countries regarding the problem of incontinence and increased state fund for

the problem. But in the third world countries it is still way behind in getting priority as a significant health problem.

There are no published studies in our country in this regard. Prevalence of UI is expected to be high because of high prevalence of other gynecological problems which are still under reported. This study would look up at the problem of UI in institutionalized women with the help of questionnaire. Considering the geographical location and demographic overview of population catchment of the institute, the studied population would be representative of whole population.

Methods

This descriptive study was conducted among 630 women in Department of Obstetrics and Gynecology at BPKIHS spanning over 2006 February to 2007 February. All the gynecological admissions were taken into account. They were evaluated for the fulfillment of inclusion criteria and presence of exclusion criteria. Following were the exclusion and inclusion criteria.

Inclusion criteria

1. All the females who aged more than 20 years admitted in Gynecology ward

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Exclusion criteria

1. Age less than 20 years, where urinary continence mechanisms are not mature yet.
2. Postpartum women who have yet to recover from the physiological changes of urinary system due to pregnancy.
3. All the pregnancy related admissions.
4. Patients who are too frail mentally to make a meaningful conversation.

They were interviewed with the formed questionnaire after taking the consent by researcher himself. Responses were noted and evaluated. Those who had difficulty in conversation due to linguistic variation, help of an attendant were taken. The study was purely based on response of the patient on the content of the questionnaire and no clinical examination and urodynamic investigations were carried out. The participants were analyzed as 5 years age group. The section of the questionnaire started with entry question of whether the participant experienced involuntary loss of urine or not. If the answer was yes, she was asked to answer more questions like if the leakage is associated with cough. If the answer was yes, a stress component was defined. If the women had urge to go to toilet, an urge component was defined. A severity index designed by Stamey was followed. Patients were enquired about relation of incontinence with physical stress. They were also enquired about relation of urinary leakage with routine activities. The impact of incontinence was dichotomized in two levels, whether they considered it as a health problem worth reporting to physician or not. Statistical analyses were done by univariate and bivariate methods. Analysis was performed using SPSS software and Epi info software. The p value <0.05 was considered to be significant.

Results

There were all together 1175 admissions in gynecological ward in the period of 2006 February to 2007 February. Out of them, 630 met entry criteria and were evaluated for the study. Their individual response was noted and following variables were analyzed.

General characters

Majority of women recruited were between ages 40 – 49 years. The mean age of admission was 44.03 years Majority of women were multiparous with average parity of 4.02 (Table 1).

Table 1: General Characters of the population

No	Variables	Values	p value
1	Prevalence of smoking	19 %(121)	
2	Prevalence of chronic disease	13 %(85)	
3	Locality of patients		
	Hilly	63.5 %(400)	
	Terai	36.5 %(230)	
4	Prevalence of Chronic disease with locality		0.004
5	Diagnosis of patients		
	a.Uterovaginal prolapsed	35.6%(224)	
	b.Others	64.4 %(406)	
6	Use of Diuretics	2.4 % (15)	

p value< 0.05=significant

Among the population studied, the prevalence of smoking was about 19%. The studied population was asked about different symptoms to rule out presence of chronic diseases. Most of them were physically well (86.5%). The chronic diseases that were ruled out were obstructive pulmonary diseases, hypertension, diabetes mellitus, and neurological illness, psychiatric disorder and various forms in combinations. Chronic obstructive pulmonary disease was the most prevalent among all entities (7.8%). Psychiatric illnesses were ruled out in relation to urge incontinence. The most common diagnosis of the admission was Uterovaginal prolapse (35.6%). Use of medications like diuretics and other medication which could influence the urinary system and could compound the problem of incontinence were ruled out. The no of patients who used such drugs were negligible (2.4%).

Specific characters

Table 2: Specific characters of population

No	Variables	Values	p value
1	Prevalence of UI	50.6%(319)	
2	Stress Incontinence	20.6%(130)	
	Urge Incontinence	33.5 % (211)	
3	Age and UI		0.008
4	Parity and UI		0.001
5	Perception of UI as health problem	17.5%(110)	
	Reporting to physician	17.5% (110)	0.001

p value< 0.05=significant

All the participants were asked about involuntary loss of urine. Involuntary loss of urine in any form was considered a positive response. It could be their past complaint or may be contextual with present gynecological diagnosis. The prevalence was about

50.6%. It included all the variants of urinary incontinence. The prevalence of stress urinary incontinence was found to be 20.6% of the total patients. Overall prevalence of urge urinary incontinence was found to be 33.5 % of the total patients. An analysis was performed for prevalence of urinary incontinence and with relation to the age of the patient. In general prevalence of UI increased with age (**p=0.008**). The maximum prevalence was between the age group 40 years to 50 years. The results were analyzed for the relation between prevalence of urinary incontinence and parity of the patients. The prevalence of UI was found to be increased along with the increase in parity of the patient (**p=0.001**). All the patients who responded positively to the query of presence of urinary incontinence were asked about the aggravating factors for it. Most of the patients stated that they were unable to identify the precipitating factor definitively. Few of them could correlate it with running of water, standing and walking (24%). The presence of urinary incontinence was graded in a system that was internationally accepted. The patients were asked about nocturnal incontinence, loss of urine with routine activities, its association with physical activities and whether it occurred without relation to physical activity. The grading of 0 was continent. Majority of them were of grade 1 and 2. All the participants who responded positively to the presence of urinary incontinence were enquired about how they regarded the problem of incontinence. Number of people who thought it was a health problem was staggeringly low (17.5%). It was quite interesting to find out that most of the women who had urinary incontinence had reported to physician at least once though they did not consider it a health problem (**p=0.001**) (Table 2).

Discussion

Urinary incontinence is a common condition among women. The estimate of prevalence of incontinence among women however varies widely. These differing results can partly be attributed to the use of different definition of incontinence. Study samples selected on different criteria and variation in survey procedures also contribute to varying prevalence estimates. There are wide variations in results of hospital based study and community based study. In 1998, the 1st international consultation on incontinence recommended the development of standardized

instruments for measuring the prevalence of incontinence in community survey, including a screening question for any involuntary loss of urine, a measure of frequency, quantity and duration.⁴ In this study, 50.6% of the women reported that they had involuntary loss of urine. The prevalence of incontinence was increased with increasing age. The prevalence is higher than those seen in EPINCONT (Epidemiology on Incontinence in the Country of Nor Trondelag) study⁵, where the prevalence was 25%. In a study conducted by Yarnell J W et al., the prevalence of incontinence was found to be 45%.⁶ Both of these studies were community based study where the prevalence is lower than hospital based study. The finding in our study was consistent with hospital based study where prevalence is higher. In a hospital based study, Egan et al⁷ reported the prevalence to be 5-64.6%. In another study, Fernie et al. reported the prevalence of 38%.⁸

In this study, the prevalence of incontinence increased with increase in age and parity of the patients. The severity of incontinence also increased with increase in age and parity of the patients. These results were consistent with results of most of the epidemiological survey of incontinence carried around the world. The most common type was urge incontinence, 33.5%, whereas prevalence of stress incontinence was 20.6%. In EPINCONT study it was 10% and 50% respectively. In a study conducted by Nygaard et al,⁹ it was 36% and 40% respectively.

The prevalence of urge incontinence in this study was probably due to interrogation of hospital based population where the mean age of presentation was high (44.03 years). Literature says urge incontinence is more common in this age group. In the older people, urge incontinence becomes the most prevalent type. Only one third of the incontinent women stated that their leakage was a health problem. However, it was highly subjective on the part of patients what did they consider as a health problem. The study had not analyzed those factors in details. In EPINCONT study, 10% stated that it was nuisance. In a study conducted by Saleh et al,¹⁰ 70.4% stated that it was a health problem. However, the number of patients who thought it was their health problem, most of them had reported to the physician (**p value <0.05**). About two third of the women never considered it as a health problem. That was probably lack of awareness

regarding the incontinence among the population. High level of ignorance and rampant illiteracy among Nepalese population may be other contributing factors.

Conclusion

This survey confirmed that involuntary loss of urine is highly prevalent among adult hospitalized women.

Since this institute caters the need of most of the eastern region of this country, the population of patients who were taken in survey was a fair representation of general population. This could be regarded as strength of the study.

This study was different in than most of the study conducted on incontinence that the patients were directly interrogated instead of postal questionnaire. However patients were not given enough time to think about the symptoms that could have influenced the results as well. Regarding assessment of severity and type of the incontinence, the subjective variation could not be ruled out because of lack of urodynamic investigations and wide prevalence of lower urinary tract symptoms among the survey population.

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