

## Prevalence and Risk Factors of Urinary Incontinence in Women at Teaching Hospital of Kara

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### Abstract

**Objective:** Determine the prevalence and risk factors of urinary incontinence in women at Teaching Hospital of Karas

**Results:** In total, 58 women had completed the questionnaire, out of a staff of 102 women in the paramedical and administrative body of Teaching Hospital of Kara ; ie an estimated response rate of 56.8%.

The average age of the women who participated in the survey was 40.84 +/- 10.46 years. The average body mass index was 28.05 +/- 4.97 kg / m<sup>2</sup>.

In the population of women surveyed, the average number of pregnancies was 2.7 +/- 1.5; the average number of natural deliveries was 1.8 +/- 1.5.

The prevalence of urinary incontinence in our study was 20.69%.

Among the incontinent, 25% (n = 3) had an stress UI, and 41.7% (n = 5) an urge UI

In our study, there was a significant relationship between the number of natural deliveries and the occurrence of UI (p = 0.032)

**Conclusion:** The prevalence and risk factors for urinary incontinence differ between studies. This observation reflects the complexity of this pathology in women, who continue to suffer from it enormously. There needs to be a consensus of the various researchers in this field, in order to find adequate preventive and curative means, for better management of urinary incontinence

**Keywords:** Urinary incontinence, prevalence, risk factors, Kara

### INTRODUCTION

Urinary incontinence (UI), is defined as an involuntary loss of urine through the urethra, constituting a social or hygiene problem and which can objectively be demonstrated [1]. It is common in women, and presents an embarrassing character, especially in sub-Saharan Africa, preventing women from consulting for, despite the embarrassment caused. Studies have been carried out around the world, specifying not only a prevalence between 10% and 55% [2], but also risk factors for UI [3,4]. In Togo, in Kara, a semi-urban city, no study had yet been carried out to our knowledge. The objective

of our study was to determine the prevalence and risk factors for UI among women in Kara.

### PATIENTS AND METHODS

This was a descriptive cross-sectional study of women working in the paramedical and administrative corps of teaching hospital of Kara. The study took place from July 2018 to August 2018, at Kara university hospital center, for a period of one month. The choice of respondents was made by random sampling. An individual questionnaire, to be completed anonymously, had been given to them. A total of 58 women participated in the survey. The diagnosis of UI

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was retained in the event of a positive answer to the question: «do you currently have involuntary urine loss?». Three subgroups of UI were selected: Stress UI in the event of leaks preceded by exertion such as coughing, sneezing, sports practice; UI by urgency in the event of leaks preceded by an urgent need that cannot be controlled, and mixed UI in the event of a combination of the two mechanisms. We analyzed three types of risk factors:

- constitutional risk factors : age, obesity
- obstetric risk factors : the number of pregnancies, natural deliveries, cesarean sections, the occurrence of a postpartum UI
- gynecological risk factors: history of hysterectomy.

The data were processed with the epi info 7 software. The various calculations of prevalence and risk factor analysis were carried out with a confidence interval of 95%. The correlation between each risk factor and the existence of a UI was determined by the chi2 test. Statistical significance was retained when the p was less than 5%.

### RESULTS

In total, 58 women had completed the questionnaire, out of a staff of 102 women in the paramedical and

administrative body of the Kara university hospital center; ie an estimated response rate of 56.8%.

The average age of the women who participated in the survey was 40.84 +/- 10.46 years. The average weight was 70.94 +/- 16.5 kg; the average height was 1.67 +/- 0.6 m; the mean body mass index was 28.05 +/- 4.97 kg / m<sup>2</sup>.

In the population of women surveyed, the average number of pregnancies was 2.7 +/- 1.5; the average number of natural deliveries was 1.8 +/- 1.5; the average number of women who had a caesarean was 0.4 +/- 0.8. In our study, 02 women, or 3.4% had noticed an involuntary loss of urine in post partum; and 3 women, or 5.1%, had a history of hysterectomy.

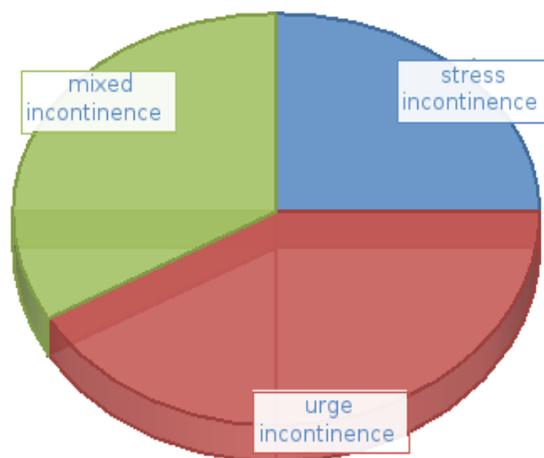
Table 1 shows the distribution of women according to the existence or not of an UI.

Among the incontinence patients, 25% (n = 3) had an stress UI, and 41.7% (n = 5) an urge UI (Figure 1)

In our study, neither age, obesity, number of pregnancies, nor the occurrence of UI postpartum explained the occurrence of UI ; on the other hand, there was a significant link between the number of deliveries by natural route, and the occurrence of a UI (p = 0.032)

**Table1.** results depending on the existence or not of involuntary urine loss

Do You Currently Have an Unintentional Loss of Urine?	Frequency	Percent
No	46	79,3
Yes	12	20,7
Total	58	100



**Figure1.** Distribution of incontinence women by type of urinary incontinence

### DISCUSSION

The prevalence of UI in our study was 20.69%. The prevalence of UI in the literature differs between studies, countries and continents: 30 to 40% [5]; 27.5% [3], 27.1% [6], 27% [7]; 23.9% [8], 23.3% [9]; 21.3% [10]; 17.7% [11]; 14.2% [12]. These differences can be explained by the fact that there are disparities in the methodologies used in the studies, but also disparities in the populations studied. So, for example, we do not find the same definition of UI in all studies. For Dahami [12], UI is defined as the occurrence of at least two episodes of involuntary urine leakage in the past month. Jitapunkul considered UI to be leaking small amounts of urine for the past 6 months [13]. In Our study, we used the International Continence Society definition which states that UI is an involuntary loss of urine through the urethra, constituting a social or hygiene problem and which can objectively be demonstrated. Thus in our study, as in that of Peyrat [3], the diagnosis of UI was made, if there was a positive answer to the question: «are you currently having involuntary urine leaks?» Dahami [12], by including the frequency of occurrence of urine leakage in his definition, had a lower prevalence of UI: 14 %. We therefore agree with Dahami [12] that the existence of a difference in the definition of UI may partly explain the difference observed in the prevalence of UI found in the different studies. We used the same definition of UI as Peyrat [3], yet the prevalence of UI in our study was lower than his: 20.9% versus 27.1%. This could be explained by the existence of racial factors; in fact, black women have a stronger perineum than that of white women [14]. In addition, there are anatomical factors behind the racial disparity in prevalence. These include the higher location of the bladder neck in black women, as well as the length of her urethra, which is said to be longer [15].

Kriss, meanwhile, by choosing a postmenopausal female population, found a high prevalence of UI, estimated at 53.3% [16]. This could be explained by the fact that advanced age is a risk factor for the onset of UI ; according to Niang [11], there is an increase in prevalence with age. Brocklehurst [17] thinks that menopause with its hormonal changes would be the first cause linked to this increase in prevalence. Other studies show a decrease in the prevalence between 55 and 75 years old and this could be explained, on the one hand, by the reduction in sporting activity and,

on the other hand, by the higher frequency of genital prolapse at this age which could mask UI [2 ; 11]

In our study, we had a mean age of 40.84 years +/- 10.46, and there was no correlation between age and onset of UI. However, certain authors like Conquy and Liu [2 ; 9] had found aging as a risk factor. Mikou [6], in the same line as Brocklehurst [17], also found that menopause was a risk factor for UI, thus explaining such a high prevalence in Kriss's study [16]. Other risk factors are often implicated in the occurrence of UI: obesity, the number of pregnancies, the number of natural deliveries, the occurrence of a UTI in postpartum, the existence of a hysterectomy as a history. In our study, only the number of natural deliveries was significantly correlated with the occurrence of UI ( $p = 0.032$ ). Pregnancy and natural childbirth cause distension of the perineal musculature, which may explain the occurrence of UI [4]. Other authors found other risk factors in their study: constipation [2; 10; 12]; enuresis [8; 12]; chronic cough [2]; recurrent urinary tract infection [10 ; 12].

Among the incontinence patients in our study, 25% ( $n = 3$ ) had an stress UI, and 41.7% ( $n = 5$ ) an urge UI. In the literature, stress UI was the most frequently found [3 ; 4 ; 6]. For Conquy [2], the practice of sports with high perineal impact would increase the risk of stress urinary incontinence, with most often a return to normal a few years after stopping the activity.

Regardless of the type of UI, some women affected by this condition are forced to wear protection. This aspect of the pathology was not described in our results.

In the literature [11], it is noted that UI had a significant physical impact (infections, local irritations), a negative impact on the daily life of incontinent women (domestic, professional, social, sports and sexual activities.), and a significant psychosocial impact such as embarrassment, anger, sadness, frustration, and fear linked to the risk of losing their job, but also to the feeling of rejection on the part of society. These aspects of the UI must be the subject of our attention in our future research, for a better follow-up of our patients.

### CONCLUSION

The prevalence and risk factors for urinary incontinence differ between studies. This observation reflects the complexity of this pathology in women, who continue to suffer from it enormously. There

needs to be a consensus of the various researchers in this field, in order to find adequate preventive and curative means, for better management of urinary incontinence.

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