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FEMALE URINARY INCONTINENCE : A CROSS-SECTIONAL STUDY FROM A RURAL AREA

Hypothesis / aims of study

Urinary incontinence is defined by the ICS as the complaint of any involuntary leakage of urine. The range of prevalence estimated among community dwelling women varying enormously (2-58%). Although urinary incontinence is not life-threatening, it is burdensome physically, psychosocially and economically. Yet, relatively little is known regarding the epidemiology of urinary incontinence; for example, prevalence, associated factors and impact on daily activities of women in a rural area. The aims of this study were to investigate the prevalence and associated factors of female urinary incontinence in a Thai rural area and to investigate impact of female urinary incontinence on quality of life.

Study design, materials and methods

From September 2003 to February 2004, a population-based cross-sectional survey was performed. Questions asked were about urinary incontinence; stress, urge, mixed within the previous 1 month, demographics such as age, marital status, occupation, menopausal status, medical diseases, parity, mode of delivery, and their offspring birthweight in form of anonymous questionnaire. A modified self-administered, incontinence-specific quality of life (I-QOL) questionnaire was also used. Written informed consent was obtained before their participation. Demographic data, obstetric history, and medical diseases were analysed using Student t-test, Chi-square or Fisher exact test. Odds ratio and its 95 percent confidence interval were calculated. A p value of 0.05 was considered as a level of significance.

Results

Of 24,843 females aged 15 – 100 years, living in Amphor Muang, Trad Province, a rural area in the eastern part of Thailand, a sample of 1,500 subjects was sent a questionnaire and 1,128 replied. The mean age was 39.08 ± 13.61 years. The overall prevalence of urinary incontinence was 36.50%, i.e. stress urinary incontinence (33.60%), urge urinary incontinence (11.00%) and mixed urinary incontinence (8.07%).

Regarding associated factors, female urinary incontinence was found to be associated with age, marital status, occupation, menopausal status, years since menopause, medical diseases, childbirth, number of parity, and mode of delivery ($P < 0.05$). Table 1 shows that married status was the strongest correlation to stress urinary incontinence among all the factors studied (Odds ratio 3.75 95%CI 2.68, 5.24, $P < 0.05$). The labouring occupation was found to be significantly related to an increasing prevalence of urge urinary incontinence (Odds ratio 4.97, 95%CI 2.89, 8.53, $P < 0.05$). Mode of delivery was significantly related to mixed urinary incontinence (Odds ratio 5.50, 95%CI 2.18, 13.86 $P < 0.05$). There was an increased prevalence of all types of urinary incontinence among women who had three or more childbirth and had delivered their children by vaginal delivery. However, the association between urinary incontinence and offspring birthweight had not be observed in this study.

Table 2 shows that incontinence-specific quality of life was affected by urinary incontinence in aspects of avoidance and limiting behavior, psychosocial impacts and social embarrassment. The mixed urinary incontinence group reported significantly greater impairment than the stress and urge urinary incontinence groups (<0.05).

Table 1 Odds ratios and 95% CI for urinary incontinence according to associated factors

Characteristics	Types of urinary incontinence		
	Stress	Urge	Mixed
Married status	3.75 (2.68-13.51)*	2.05 (1.26-3.34)*	3.04 (1.59-5.79)*
Labouring ccupation	1.86 (1.43-2.42)*	4.97 (2.89-8.53)*	5.41 (2.80-10.29)*
Postmenopausal status	2.23 (1.65-3.03)*	4.26 (2.87-6.33)*	4.90 (3.12-7.68)*
Menopausal time > 10 yrs	1.29 (0.72-2.31)	4.26 (2.87-6.33)*	2.12 (1.01-4.43)*
Medical diseases	2.10 (1.24-3.54)*	1.70 (0.82-3.51)	1.79 (0.79-4.05)
History of childbirth	3.69 (2.74-4.97)*	2.64 (1.66-4.20)*	3.82 (2.10-6.97)*
Number of parity \geq 3	1.72 (1.23-2.40)*	3.30 (2.13-5.10)*	3.46 (2.13-5.61)*
Vaginal delivery	2.30 (1.59-3.34)*	3.35 (1.70-6.60)*	5.50 (2.18-13.86)*

* P < 0.05

Table 2 Urinary incontinence and incontinence-specific quality of life

Quality of life	Types of urinary incontinence and Score		
	Stress Mean \pm SD	Urge Mean \pm SD	Mixed Mean \pm SD
Total	103.58 \pm 9.75	105.36 \pm 6.98	92.79 \pm 17.71*
Avoiding and limiting behavior	28.22 \pm 2.60	28.41 \pm 2.72	25.73 \pm 3.96*
Psychosocial impacts	51.63 \pm 5.15	51.86 \pm 4.90	46.19 \pm 9.17*
Social embarrassment	23.65 \pm 2.38	23.06 \pm 3.69	20.28 \pm 4.78*

* P < 0.05

Interpretation of results

Although urinary incontinence is usually a hidden problem, either because women considers the problem as normal or is too embarrassed to discuss with their doctors. The findings from this study should encourage health care providers to a far greater awareness of this problem. The prevalence of urinary incontinence increased with advancing age; as life-expectancy increases globally, the subsequent rise in the proportion of older women is likely to result in an increase in the prevalence and impact of urinary incontinence.

Concluding message

Urinary incontinence was experienced by one third of women in a Thai rural area and it adversely affected quality of life. Advancing age, married status, labouring occupation, postmenopausal status, years since menopause, medical diseases, childbirth, high number of parity and vaginal delivery were associated with this problem.