

PREVALENCE OF URINARY INCONTINENCE BEFORE AND DURING PREGNANCY

Hypothesis / aims of study

We aim to estimate the prevalence, the characteristics of urinary incontinence by trimester, severity and frequency and to identify risk factor of urinary incontinence before and during pregnancy.

Study design, materials and methods

We designed a transversal study in healthy, pregnant women with single pregnancy. Women with previous urogynecologic surgery, presence of neurological or cardiology diseases, cognitive disorders, diabetes mellitus, urological pathology (infectious) or current treatment with drugs different of vitamins were excluded. The sample size was estimate in 620 pregnant women. Participants were included at the first visit of their pregnancy during March to May 2008. Data were collected via a questionnaire, presence of urinary incontinence were asked before and during pregnancy, and urinary incontinence characteristics agree with the ICS joint report on the terminology for female pelvic floor dysfunction 2009. We asked urinary incontinence frequency (urinary lost 1 to 4 times per month, 1 to 6 times per week, 1 or more times per day) and severity (urinary lost in drops or stream). Prevalence were calculated in each of the three trimesters of pregnancy and before each. We performed a univariate analysis and determination of odds ratio (OR) and confidence intervals 95% (95%).

Results

The prevalence of urinary incontinence during pregnancy was 58.2% (n = 361) and before pregnancy was 34.7% (n = 215). Stress urinary incontinence predominated before (56.7% n = 122) and during pregnancy (50.4% n = 182). Multiparity was shown to be a risk factor for developing urinary incontinence with an unadjusted OR of 1.7 (95% CI 1.2 - 2.5) before pregnancy and 2.0 (95% CI 1.4 - 2.9) during pregnancy. The higher prevalence of incontinence during pregnancy was made in the second trimester with a 51.8% (n = 187). The age of 26 years or less was a protective factor OR 0.67 (95% CI 0.4 - 0.9). Table 1 identifies the frequency and severity of urinary incontinence before and during pregnancy. Table 2 identifies the prevalence and characteristics of urinary incontinence by trimester of pregnancy.

Interpretation of results

The prevalence rate of urinary incontinence in nulliparous estimated before pregnancy (30.5%) and in multiparous (44.1%) is similar to a transversal study ⁽¹⁾. Other study ⁽²⁾ found less incontinence before and during pregnancy but they don't make differences between nulliparous o multiparous.

Concluding message

During pregnancy there is an increased prevalence of urinary incontinence, especially stress urinary incontinence. Multiparity is a risk factor for developing urinary incontinence and the age of 26 years or less was a protective factor.

Table 1. Frequency and severity of urinary incontinence before and during pregnancy

	BEFORE PREGNANCY n(%)	DURING PREGNANCY n(%)
INCONTINENCE	215 (34.7)	361 (58.2)
Frequency		
1 – 4 times per month	131 (60.9)	158 (43.8)
1 – 6 times per week	37 (17.2)	77 (21.3)
1 or more per day	47 (21.9)	126 (34.9)
Severity		
Drops	173 (80.5)	257 (71.2)
Stream	42 (19.5)	104 (28.8)
Stress Urinary Incontinence	122 (56.7)	182 (50.4)
Frequency		
1 – 4 times per month	76 (62.3)	98 (53.8)
1 – 6 times per week	23 (18.8)	34 (18.7)
1 or more per day	23 (18.8)	50 (27.5)
Severity		
Drops	105 (86)	143 (78.6)
Stream	17 (14)	39 (21.4)

Urgency Urinary incontinence	40(18.6)	77 (21.3)
Frequency		
1 – 4 times per month	30 (75)	33 (42.8)
1 – 6 times per week	3 (7.5)	21 (27.3)
1 or more per day	7 (17.5)	23 (29.9)
Severity		
Drops	30 (75)	51 (66.2)
Stream	10 (25)	26 (33.8)
Mixed urinary incontinence	53 (24.7)	102 (28.3)
Frequency		
1 – 4 times per month	25 (47.2%)	27 (26.4%)
1 – 6 times per week	11 (20.8%)	22 (21.6%)
1 or more per day	17 (32%)	53 (52%)
Severity		
Drops	34 (64.2%)	60 (58.8%)
Stream	19 (35.8%)	42 (41.7%)

Table 2. Prevalence of urinary incontinence by trimester and by characteristics during pregnancy

	First trimester n (%)	Second trimester n (%)	Third trimester n (%)
Urinary incontinence	81 (22.4)	187 (51.8)	93 (25.8)
Stress	37 (20.3)	99 (54.4)	46 (25.3)
Urgency	21 (27.3)	39 (50.6)	17 (22.1)
Mixed	23 (22.5)	49 (48)	30 (29.4)

References

1. Morkved, Bo K. Prevalence of urinary incontinence during pregnancy and postpartum. *Int Urogynecol J* 1999;10:394-398
2. Viktrup L, Lose G, Rolf M, Barfoed K. The symptom of stress incontinence caused by pregnancy or delivery in primiparous. *Obstet Gynecol* 1992; 79: 945–9.

<i>Specify source of funding or grant</i>	0
<i>Is this a clinical trial?</i>	Yes
<i>Is this study registered in a public clinical trials registry?</i>	Yes
<i>Specify Name of Public Registry, Registration Number</i>	Instituto Nacional de Perinatología Isidro Espinosa de los Reyes
<i>Is this a Randomised Controlled Trial (RCT)?</i>	No
<i>What were the subjects in the study?</i>	HUMAN
<i>Was this study approved by an ethics committee?</i>	Yes
<i>Specify Name of Ethics Committee</i>	Ethics Committee of Instituto Nacional de Perinatología Isidro Espinosa de los Reyes
<i>Was the Declaration of Helsinki followed?</i>	Yes
<i>Was informed consent obtained from the patients?</i>	Yes