#600 The trimester-based changes of severity, distress and life-impact of urinary incontinence in nulliparous Turkish pregnant women

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Hypothesis/aims of study

In the literature, it has been indicated that one of the most commonly occurred lower urinary tract dysfunction during pregnancy is to be urinary incontinence (UI) that may be related to the hormonal and mechanical changes occurring during pregnancy (1). Gestational UI has negative impacts on different aspects of quality of life (QoL) and increases the risk of UI occurrence in later period of life (2).

The aim of the present study was to investigate the trimester-based severity of UI, UI related symptom distress and impact on QoL in nulliparous Turkish pregnant women. **We hypothesized that women would have experienced greater UI severity, UI related symptom distress and impact on QoL in the third trimester than in the first or second trimester.**

Materials and methods

The present study was a questionnaire-based study, which included low risk and nulliparous pregnant women. Sociodemographics and obstetric characteristics of the pregnant women who underwent routine follow-up in the perinatology department were recorded. Inclusion criteria were being first pregnancy, not experiencing UI before pregnancy and being willingness to participate. Pregnant women with systemic disorders and history of previous pelvic floor surgery or pelvic radiation were excluded. The Turkish versions of the Incontinence Severity Index (ISI), the short form of Urogenital Distress Inventory (UDI-6) and the Incontinence Impact Questionnaire (IIQ-7) were used to determine UI severity, UI related symptom distress and QoL. The ISI, UDI-6, and IIQ-7 were completed in the first (11-14 gestational week), second (~24 gestational week) and third (~37 gestational week) trimesters. Statistical analysis was performed using SPSS (ver. 18) program. Descriptive statistics were presented as mean ±standard deviation, and number (percentage). Friedman tests were conducted to test significant changes in the UI severity, UI related symptom distress, and QoL among different trimesters. Statistical significance level was accepted as $p<0.05$.

Results

Seventy-three pregnant women were invited to participate to this study and three pregnant women who had UI symptom before pregnancy were excluded. Seventy nulliparous pregnant women (mean age was 32.1±6.4 years, Body Mass Index (BMI) was 25.7±2.5 kg/m^2, 26.8±2.7 kg/m^2 and 28.8±3.4 kg/m^2 in the first, second, and third trimester) were evaluated. In our study, the percentage of stress UI was 14%, 28% and 40%; urge UI was 10%, 10%, 38%; mixed UI 0%, 4%, 14% in the first, second, and third trimester, respectively. Although there were statistically significant differences in the ISI and UDI-6 scores ($p<0.05$) among the first, second and third trimesters, IIQ-7 scores did not show significant differences ($p>0.05$). The trimester-based statistics of the ISI, UDI-6, and IIQ-7 scores were presented in Table 1.

Table 1. The trimester-based statistics of the ISI, UDI-6 and IIQ-7 scores.

n=70	First trimester (X±*SS*)	Second Trimester (X±*SS*)	Third Trimester (X±*SS*)	p
ISI	1.5±0.5	1.7±0.7	2.02±1.3	<0.001*
UDI-6	7.9±7.7	12.6±11.9	20.0±16.3	<0.001*
IIQ-7	2.6±2.5	3.3±1.2	4.5±4.1	0.1

IIQ-7: Incontinence Impact Questionnaire-7.
ISI: Incontinence Severity Index.
UDI-6: Urogenital Distress Inventory-6.
Friedman test was used, * $p<0.05$.

Interpretation of results

. UI is a symptom that may occur during pregnancy in nulliparous Turkish pregnant women, even if they have no UI symptom before pregnancy. The percentage and severity of UI increased proportionally to gestational week. However, in accordance to the ISI score, the severity of UI was mild in the first, second and third trimesters. The highest scores of UI severity and related symptom distress were found in the third trimester. However, impact of UI on QoL did not change among the trimesters. We believe that no significant differences in impact of UI on QoL among the trimesters may be related to mild UI. Additionally, an interesting aspect of the present study was that the occurrence of UI was in the first trimester although women did not experience any UI symptom in the pre-pregnancy period.

Concluding Message

UI is an important problem seen with increasing severity and distress during pregnancy. Therefore, the clinicians working in the field of the perinatal care must be aware of UI. To prevent the occurrence and progression of UI during pregnancy, effective pre-pregnancy approaches such as pelvic floor muscle training and lifestyle modifications should be recommended.

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References

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