

## Urinary Incontinence in Diabetic Pregnancy: Severity and Impact on Quality of Life over the first year postpartum

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**Introduction.** The associations between diabetes mellitus (DM) and urinary incontinence (UI) and between pregnancy and UI are well established in the literature. However, the complex inter-relationships among DM, pregnancy and UI have rarely been investigated. The long-term associations of UI in diabetic pregnant women over a continuous period since the pregnancy until the first year postpartum are also unclear and remains to be evaluated. **Objective.** To investigate the severity and impact of UI on quality of life (QoL) of diabetic pregnant women over a 1-year follow-up period. **Methods.** This study was conducted in the Perinatal Diabetes Research Center of the Botucatu Medical School/UNESP, and was approved by the Research Ethics Committee of the Institution (CAAE: 20639813.0.0000.5411). Three hundred eighty-eight women were evaluated at five-time-points: 24-28 and 34-38 gestational weeks, 24-48 hours, 6 weeks and 6-12 months postpartum. The diagnosis of Gestational Diabetes Mellitus (GDM) was established between 24th and 28th gestational weeks, by the 75 g-OGTT test according to ADA's criteria. Urinary incontinence was defined according to the International Continence Society and the severity and impact on QoL was evaluated by ISI (Urinary Incontinence Severity Index) and ICIQ-SF (International Consultation on Incontinence Questionnaire Short Form). From the data, the pregnant women were classified into two study groups: normoglycemic incontinent (NI; normal 75-g GTT; n=168) and diabetic incontinent (DI; abnormal 75-g GTT; n=220). The NI and DI groups were compared using the Chi-square test for categorical variables and Student-t test for quantitative variables. All analyses were performed using SAS software for Windows, v.9.3. **Results.** The responses to the ISI and ICIQ-SF questionnaires showed greater severity combined with greater bother-score in diabetic women, with severe and very severe classification, compared to normoglycemic women in all time-points. The third item of the ICIQ-SF also demonstrated higher levels of interference on daily life in diabetic women, both during pregnancy and after delivery, except at 6 weeks postpartum (P=0.1105). **Conclusion.** Diabetic pregnant women tended to exhibit more severe symptoms of UI as well as worse impact on QoL during pregnancy with a excessive tendency to show a similar reaction over the first year postpartum. These study not only contradicts the old concept that the effects of GDM vanish soon after delivery, but also reinforce the positive interaction between pregnancy, GDM and long-term maternal outcome. Providers, including physiotherapists, should work with patients to prevent and minimize the burden of UI symptoms and the development of postpartum DM.

**Keywords:** Urinary Incontinence; Pregnancy; Gestational diabetes mellitus.

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