

INCIDENCE OF URINARY INCONTINENCE DURING HIGH RISK PREGNANCY

Hypothesis / aims of study

Pregnancy and childbirth are often implicated as major factors in the development of urinary incontinence (UI). UI is a distressing and disabling condition affecting social, psychological, occupational, physical and sexual aspects of life (1). Currently, data on the incidence of incontinence in pregnant women at high risk is lacking. We hypothesized that there is a high incidence of UI in this group of patients.

The aim of this study was to assess the incidence of urinary incontinence during high risk pregnancy.

Study design, materials and methods

High risk pregnant women, according to the system developed by Hobel *et al.*, attending for antenatal care in a tertiary hospital were included in this study. A score of 10 or more in the pregnancy risk assessment questionnaire (1) was used to identify high risk pregnancy that should receive more than routine prenatal care. Exclusion criteria included previously reported urinary incontinence episodes.

Charts of 100 consecutive patients were reviewed to collect demographic and clinical data. Telephone contact was also used to confirm whether the patient was continent and to apply the Portuguese language validated King's Health QOL Questionnaire during late pregnancy (third trimester).

Student's t-test was used to statistically compare continuous variables and chi-square test to compare categorical variables. Statistical Packet for Social Sciences version 13.0 for Windows (SPSS Inc., Chicago, IL, USA) was used for statistical analysis. All differences with a p value less than 0.05 were considered statistically significant.

Results

From January to December 2013, one hundred consecutive high-risk pregnant women were included in this study. Mean age was 29.23±6.7 years (15 to 46 years). Mean gestational age was 37.55±2.13 months (26 to 40 months). The two most frequent comorbidities were diabetes mellitus (86%) and hypertension (14%). Mean weight just before pregnancy was 78.08±16.88 kg (43 to 123 kg). Mean weight at last visit (third trimester) was 88.57±17.26 kg (54 to 139 kg). Mean weight increase during pregnancy was 10.4±5.8 kg (2 to 25 kg). Fourteen percent of patients reported smoking. Mean number of deliveries (vaginal plus cesarean sections) was 2.71±1.52 (1 to 8). In regards to the previous deliveries, mean weight of largest baby was 3322.5±635.65 g (1060 to 5010 g). Overall incidence of urinary incontinence (UI) was 11%. Mean number of daily UI episodes among these patients was 1.41±1.3 (0 to 3 episodes per day).

Secondary analysis showed that 23% of patients reported dyspareunia and 35% of patients reported chronic constipation.

Clinical parameters such as weight increased through pregnancy (p=0.23), smoking (p=0.84), constipation (p=0.63), number of previous vaginal deliveries (p=0.84) and number of previous cesarean sections (p=0.13) were not associated with an increased incidence of UI.

Table 1. Urinary incontinence and clinical parameters during high-risk pregnancy*

New onset of urinary incontinence	Baseline BMI	Late pregnancy BMI	Mean weight increase during pregnancy	Mean number of vaginal deliveries	Mean number of cesarean sections
Yes	29.83±3.71	33.31±4.41	8.9±3.72	2±0.89	0.36±0.67
No	29.37±7.56	33.37±8.03	10.6±4.64	1.89±1.65	0.84±1.01

*Values expressed according to the mean and standard deviation. P >0.05 for all variables.

Interpretation of results

The increasing pressure of the growing uterus and fetal weight on pelvic-floor muscles (PFM) throughout pregnancy, together with pregnancy-related hormonal changes, may lead to reduced PFM strength as well as their supportive and sphincteric function. These factors may cause hypermobility of the bladder neck and urethra, leading to urethral sphincter incompetence. Previous studies reported a high prevalence of UI during late pregnancy (up to 53.8%) (2). So far, the high-risk patients have not been extensively studied. Our series showed that incidence of UI in such patients is 11%. It was not possible to identify reliable clinical parameters to predict which patients will develop this problem. The small number of patients enrolled in this prospective series is a limiting factor.

Concluding message

Overall incidence of urinary incontinence was 11% during late pregnancy. This study was unable to identify reliable clinical risk factors to predict IU incidence throughout high-risk pregnancy.

References

- Hobel CJ, Hyvarinen MA *et al.* Prenatal and intrapartum high-risk screening. *Am J Obstet Gynecol.* 1973; 117: 1-9.
- Tanawattanacharoen S, Thongtawee S. Prevalence of urinary incontinence during the late third trimester and three months postpartum period in King Chulalongkorn Memorial Hospital. *J Med Assoc Thai.* 2013 Feb;96(2):144-9.

Disclosures

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