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Urinary incontinence in pregnant women and its relation with socio-demographic variables and quality of life

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ABSTRACT

Objective: To investigate the occurrence of urinary incontinency (UI) in pregnant women and its relationship with socio-demographic variables and quality of life.
Methods: A descriptive cross-sectional multicenter study was conducted to investigate 495 women using the International Consultation on Incontinence Questionnaire – Short Form (ICIQ-SF). The survey was conducted on the same day of delivery, with the volunteers still in the maternity ward. Statistical analysis of the comparison between groups 1 (incontinence) and 2 (continent) was done using chi-square test for comparison of proportions of women with and without urinary incontinency and logistic regression analysis.
Results: From the total of 495 women studied, 352 (71%) reported having had UI during the last four weeks of pregnancy. Group 1 presented the ICIQ-SF median score of 11 (range 3-21), considered as severe impact in quality of life. Logistic regression analysis showed that there was a closer relation between the self-report of UI with the following variables: level of education below 8 years (OR: 2.99; $p < 0.001$), black women (OR: 2.32; $p = 0.005$), women with more than 3 children (OR: 4.93; $p < 0.001$), obese (OR: 4.22; $p < 0.001$) and normal vaginal delivery (OR: 2.59; $p < 0.001$).
Conclusion: The majority of pregnant women have UI, negatively affecting the quality of their lives.

Incontinência urinária na gravidez e sua relação com as variáveis sociodemográficas e qualidade de vida

Palavras-chave:
Incontinência urinária

RESUMO

Objetivo: Investigar a ocorrência de incontinência urinária (IU) em mulheres grávidas, e a relação com variáveis sociodemográficas e a qualidade de vida.

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Métodos: Estudo multicêntrico do tipo descritivo, transversal, a fim de verificar por meio do *International Consultation on Incontinence Questionnaire – Short Form* (ICIQ-SF) a IU em 495 mulheres. Os dados foram coletados no dia do parto, nas maternidades elegidas. A comparação das proporções entre os grupos 1 (incontinente) e 2 (continente) foi realizada pelo teste de qui-quadrado e a verificação das variáveis que mais se associavam com a IU por análise de regressão logística.

Resultados: No total 71,11% (352) apresentaram IU durante as últimas quatro semanas de gestação. O grupo 1 apresentou escore do ICIQ-SF de 12,11 (min. = 3 e máx. = 21), considerado severo impacto na qualidade de vida. Na análise multivariada de regressão logística encontramos maior relação entre o relato de IU com as seguintes variáveis: escolaridade abaixo de 8 anos (OR: 2,99; p < 0,001), raça negra (OR: 2,32; p= 0,005), mulheres com mais de 3 filhos (OR: 4,93; p < 0,001), obesas (OR: 4,22; p < 0,001) e parto normal (OR: 2,59; p < 0,001).

Conclusão: A maioria das mulheres tinha IU, afetando sua qualidade de vida negativamente.

Introduction

The standardization committee of the International Continence Society (ICS) defines urinary incontinence (UI) as "any involuntary urine leak complaint".[1]

During pregnancy, the most common type of UI is stress urinary incontinence (SUI), in which anatomical changes occur, such as bladder neck hyper mobility and sphincter mechanism incompetence.[2] Bladder neck descent arises from the 12th week of pregnancy.[2] Pelvic floor muscles strength decrease is observed due to the increase of relaxing concentrations, from the 14th to the 24th weeks of pregnancy. Thereafter, stabilization of this concentration occurs, which remains stable until the end of pregnancy.[3]

SUI is a symptom frequently observed during the pregnancy period, mainly in the third trimester of pregnancy, and generally presents a spontaneous resolution after delivery, with prevalence between 20% and 60%.[4] Despite the fact that the pudendal nerve usually recovers two months after delivery, pelvic floor muscle dysfunction may persist for six months.[5] Snooks et al.[6] described that some women still had clinical symptoms of SUI five years after vaginal birth. Other researchers observed a 42% prevalence of UI during pregnancy and a 38% prevalence eight weeks after delivery.[7]

In a retrospective study, Fritel et al.[8] reported SUI prevalence four years after delivery in 19% of patients. According to the ICS, UI is related to deterioration of quality of life, because it is an unpleasant, stressful condition that limits women's activities, leading, in numerous cases, to social isolation. Until now, it is not well understood which, and if so, to what extent socio-demographic variables are related with UI and deterioration of quality of life.

As millions of people suffer from this problem, a number of studies from around the world (the USA, Ireland, Taiwan, and Nigeria)[9–11] have investigated the association between UI and its impact on quality of life.

More information on this subject is still necessary. Therefore, the ICS recommends that every epidemiological study about UI should also include questionnaires assessing this association.[12]

Thus, the objective of this study was to verify the occurrence of UI in Brazilian pregnant women and its relationship with socio-demographic variables and quality of life.

Methods

This study included 495 women. In order to achieve a higher number of women in a shorter period of time, they were interviewed while still in the ward. It must be clarified that, despite the fact that the data was collected immediately post partum, i.e., from the first to the tenth day after delivery, all the questions referred to the third trimester of pregnancy, since the International Consultation on Incontinence Questionnaire – Short Form (ICIQ-SF)[13] has questions which refer only to the last four weeks of pregnancy.

All participants of the study signed an informed consent. The study was performed in accordance with the Brazilian regulation regarding research in human beings (Resolution 196/96 from the National Health Council), and was also approved by the ethics committee of each institution.

A descriptive cross-sectional multi-center study was conducted to investigate UI during pregnancy using the ICIQ-SF.[13] It is a simple and brief questionnaire that can be self-administered, which was originally developed and validated in English by Avery et al.[12]

The ICIQ-SF was adapted and validated for Brazilian Portuguese by Tamanini et al.[13] The ICIQ-SF was chosen for its suitability for the Brazilian society.

All women who reported not having any urine loss were defined as "continent"; all women who reported symptoms of incontinence were defined as "incontinent". Furthermore, there was a set of eight items of self-diagnosis, related to the causes or the situations of UI as experienced by the patients, who reported having had the symptoms through the question: 'When do you lose urine?'[13] [responses: 'never,' 'I lose urine before going to the toilet,' 'I lose urine when I cough or sneeze,' 'I lose urine when I sleep,' 'I lose urine when I do physical activities,' 'I lose urine when I finish urinating and I am getting dressed,' 'I lose urine without any apparent reason,' and 'I lose urine all the time'].

The quality of life score ranges from 0-21; the higher the score, the worse the quality of life. The impact on quality of life was defined according to the score of question 5, which is the sum score of results of questions 3, 4, and 5.

This questionnaire has two questions (questions 1 and 2) regarding date of birth and gender, and four questions regarding the frequency, the severity, and the impact of UI