

## OCURRENCE OF URINARY INCONTINENCE BEFORE AND DURING PREGNANCY IN PHYSIOLOGICAL AND DIABETIC PREGNANT WOMEN.

### Hypothesis / aims of study

Verify the occurrence of urinary incontinence (UI) before and during pregnancy in physiological and diabetic pregnant women.

### Study design, materials and methods

This is a retrospective study, performed by descriptive analysis and analytical records of 506 pregnancy women physiological (426) and diabetics (80), missed the team of physiotherapy group during period from 2004 to 2010, which contained questions on urinary complaints of pregnant women. Inclusion criteria were singleton pregnancies, without clinical or obstetrical complications for the physiological group and diagnosis of Gestational Diabetes Mellitus (DGM) for diabetic pregnant women group, and questionnaires filled out. For statistical analysis were used the Chi-square Test and Mann-Whitney Test, with a level of significance of 5%.

### Results

The sociodemographic data of patients evaluated, showed a mean age of 28.4±6.2 years and 27.7±5.8 years in the group of pregnant women physiological and 32.1±6.9 years in diabetic patients. The body mass index (BMI) between groups was obtained on average 26.0 ± 1.7 kg / m<sup>2</sup> with 26.2 ± 7.7 and 25.0 ± 4.7 kg / m<sup>2</sup> in groups the physiological and diabetic patients respectively (p = 0.033). The mean gestational age (GA) at the time of interview, was 24.3 ± 8.1 weeks, with 23.5 ± 8.1 and 28.9 ± 7.2 weeks for groups of physiological and diabetic (Table 01). The data showed that the obstetrics patients had a mean of 2.3 ± 1.4 pregnancies, and 2.2 ± 1.3 pregnancies in the saline group and 2.9±1.3 pregnancies among diabetic women and by parity was achieved average of 0.9±1.1 births among healthy pregnant women and 1.4±1.3 births in pregnant women with a diagnosis of diabetes. As the occurrence of urinary incontinence in pre-pregnancy, 85.6% (369) of the patients had no urinary incontinence (p=0.122), when comparing each group separately obtained the percentage of 13.40% (57) UI in healthy pregnant women and 20.0% (16) in non-healthy. During pregnancy, 49.0% (248) (p= 0.180) of all pregnant women assessed had UI, these 47.7% (203) belonged to the group of pregnant women physiological and 56.3% (45) pregnant women with diabetes, but in both cases there were no significant differences (Table 02).

Table 01: Values of Body Mass Index and Gestational Age between Physiological and Diabetes pregnant women groups.

	Group	N	Men	Standard Deviation	Minimum	Maximum	Median	P-valor
BMI	Physiological	399	26.2	4.7	17.4	47.6	25.6	0,033*
	Diabetes	77	25.0	4.7	16.8	40.0	23.7	
	Total	476	26.0	4.7	16.8	47.6	25.5	
GA	Physiological	421	23.5	8.0	7.0	39.0	24.0	< 0,001*
	Diabetes	80	28.9	7.2	10.0	39.0	31.0	
	Total	501	24.3	8.1	7.0	39.0	25.0	

\* Mann-Whitney Test

Table 02: Occurrence of urinary incontinence in pre-pregnancy and during pregnancy

Group	UI before pregnancy			P-valor	UI during pregnancy			P- valor
	No	Yes	Total		No	Yes	Total	
Physiological	369	57	426	0,180*	223	203	426	0.122*
	86.6%	13.4%	100.0%		52.3%	47.7%	100.0%	
Diabetes	64	16	80	0,180*	35	45	80	0.122*
	80.0%	20.0%	100.0%		43.8%	56.3%	100.0%	
Total	433	73	506	0,180*	258	248	506	0.122*
	85.6%	14.4%	100.0%		51.0%	49.0%	100.0%	

\* Chi-square Test

### Interpretation of results

Pregnancy causes many changes in the urinary and genital tract of women. It is known that hormonal and mechanical factors provide an increase of urinary symptoms during pregnancy, especially the pre-existing in that period <sup>1</sup>. And, when associated with diseases such as gestational diabetes, these symptoms may worsen. A pregnant woman with GDM, untreated, has a higher risk of obesity, premature rupture of membranes, preterm delivery, breech fetus, fetal macrosomia, urinary disorders and pre-eclampsia, and complications for the newborn <sup>2</sup>. Although the pregnant women with GDM, they are more prone to such complications, the data from this study showed a significant increase in BMI with GA significantly lower among pregnant women physiological, thus showing that pregnant women with GDM had a good prenatal care. Although the occurrence of UI during pregnancy in this study was considered high (49.0%) agrees with the results of Brown<sup>3</sup> in which the percentage of UI ranged between 10.8% and 55.9% before pregnancy, such occurrences do not were significant in this study compared the two periods in both group.

#### Concluding message

The occurrence of IU before and during pregnancy was 13.4% and 47.7% in physiological pregnancy women, and 20.0% and 56,3% in diabetic pregnant women, respectively.

#### References

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3. Brown SJ; Donath S; MacArthur C; McDonald EA; Krastev AH Urinary incontinence in nulliparous women before and during pregnancy: prevalence, incidence, and associated risk factors. Int Urogynecol J Pelvic Floor Dysfunct; 21(2): 193-202, 2010 Feb

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<b><i>What were the subjects in the study?</i></b>	<b>HUMAN</b>
<b><i>Was this study approved by an ethics committee?</i></b>	<b>Yes</b>
<b><i>Specify Name of Ethics Committee</i></b>	<b>Comitê de ética e pesquisa da UNIFESP/ EPM e Hospital São Paulo</b>
<b><i>Was the Declaration of Helsinki followed?</i></b>	<b>Yes</b>
<b><i>Was informed consent obtained from the patients?</i></b>	<b>No</b>