



Is there an effect of the delivery method in developing female urinary incontinence and Lower Urinary Tract Symptoms (LUTS)?

A questionnaire-based survey. #364

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Hypothesis / aims of study. Urinary incontinence and Lower Urinary Tract Symptoms (LUTS) are common disorders during pregnancy and occasionally remain postpartum influenced, as it is believed, by the mode of delivery (1). However, there is a controversy in the scientific community whether delivery with cesarean section has a protective role for the physiological function of the female lower urinary tract in comparison with vaginal delivery (2). The study aimed to record the prevalence and severity of LUTS and/ or incontinence in parous women according to the delivery method and investigate associations between the delivery method as well as other demographic and obstetric factors and the presence / severity of urinary incontinence / LUTS.

Study design, materials and methods.

Randomly selected women (N=98 women random responders to the online invitation and N=128 responders during a visit to their gynecologist either in a public teaching hospital or in a private office, total N=226) aged 20 - 45 years responded anonymously to an online and a printed version of a three part self – reported questionnaire:

- 1.Introductory part (demographic, obstetric and medical characteristics of the participants)
2. IPSS
3. UDI-6 (part of PFDI - 20)

Results. The study population was divided into three subgroups according to the delivery method: vaginal delivery (45.23%) ,elective

cesarean section (39.88%), both modes (14.88%). Cesarean section performed for obstructed labor, neurological/urinary disorders, cancer history, current pregnancy and nulliparity were considered exclusion criteria.

In the three group univariate analysis, significant difference was observed concerning the UDI-6 score. Specifically, 32.0% of women with both types of deliveries were in the “>30% impaired” group, whereas in women with vaginal-only and cesarean-only deliveries the proportions were 17.1% and 10.4%, respectively (P=0.047). Table 1 correlates IPSS and UDI-6 results with mode of delivery.

Table 1		VD	CS	BM	P-value
IPSS	Mild symptoms	59(77.6%)	53(79.1%)	22(88%)	0.527
	Moderate to severe symptoms	17(22.4%)	14(20.9%)	3(12%)	
UDI-6	≤ 30%	63(82.9%)	60(89.6%)	17(68%)	0.047
	> 30%	13(17.1%)	7(10.4%)	8(32%)	

Particularly: **UDI-6:** women who underwent cesarean section had significantly lower frequency in losing small amounts of urine (13.4%) as opposed to labor with vaginal delivery (34.2%) and both delivery modes (28%) (P=0.015). **IPSS:** the most frequent symptom in all groups was micturition frequency (70.7% - vaginal delivery group, 65.7% - cesarean delivery group, 68% - both modes - P=0.664). BMI/age were insignificant as risk factors. Higher UDI-6 scores noted in women with both delivery methods, while the IPSS analysis did not reach any difference. Additionally, women undergoing cesarean-only delivery reported less frequently loss of small amounts of urine.

Concluding message. In this study, cesarean section appeared to decrease the loss of small amounts of urine, but not specifically stress or urgency incontinence, compared to vaginal delivery. Interestingly, women with both delivery modes tended to develop higher scores in the UDI-6. No predictive factor was found in association with LUTS. Results need to be interpreted with caution, as the study was not prospectively designed with statistical calculation of an appropriate size sample.

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Abstract references

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