

TO DETERMINE THE EFFECT OF ONE INTERVAL VAGINAL DELIVERY ON URINARY STRESS INCONTINENCE: A PROSPECTIVE COHORT STUDY**Aims of Study**

To analyze the effect of one interval vaginal delivery on the prevalence of urinary stress incontinence amongst a cohort of nulliparous women.

Methods

A cohort of 276 nulliparous women without urinary stress incontinence was recruited consecutively in 1996, after they had vaginal delivery, and were followed-up for urinary incontinence in 2000. The age, obstetric variables of the 1996 delivery (mode of delivery, genital tract trauma, birth weight, epidural analgesia, episiotomy, durations of labor, postpartum urinary retention), and the presence of interval vaginal delivery during the follow-up period were recorded. The obstetric factors and the prevalence of urinary stress incontinence at follow-up were then compared between women with and without interval vaginal delivery. Logistic regression analysis was performed to test the independence of the obstetric variables in the index pregnancy and the presence of one interval vaginal delivery, with urinary stress incontinence being the dependent variable.

Results

A total of 148 women were followed-up. Post hoc power analysis was based on the two proportions of urinary stress incontinence in the women with and without an interval delivery used in the Chi-square test. In order to detect a Cohen's effect size (w) of 0.3 in a Chi-square test with type I error of 0.05, a total sample size of 148 women would give a power of 68.2%. A logistic regression analysis of a binary dependent variable (the presence of urinary stress incontinence) with a sample size of 148 women achieved 70.7% power at a type I error of 0.05 to detect a change from the baseline incontinence prevalence of 25.7% to 10.0%. The prevalence of urinary incontinence was 28.6% in women without interval delivery and 21.1% in women with one interval delivery. There was no significant difference in the prevalence of urinary incontinence between the two groups (χ^2 test, $p = 0.31$):

	Women without interval vaginal delivery (N = 91)	Women with one interval vaginal delivery (N = 57)	p
Urinary stress incontinence ^b			
Yes	26	12	0.31 ^a
No	65	45	

^a Chi-square test

^b 4 years after the index pregnancy

Logistic regression showed that none of the obstetric variables, or the presence of one interval vaginal delivery, was significantly associated with urinary incontinence:

Covariates ^a	Coefficient B	Standard error	p
First stage of labor (minutes) ^b	-0.00	0.00	0.55
Second stage of labor (minutes) ^b	-0.01	0.01	0.57
Third stage of labor (minutes) ^b	-0.06	0.04	0.11
Birth weight (grams) ^b	0.00	0.00	0.90
Mode of delivery* ^b	0.25	0.55	0.65
Genital tract trauma ^b	0.55	0.69	0.43
Epidural analgesia ^b	-0.17	0.87	0.85
Episiotomy ^b	-0.55	1.23	0.66
Postpartum urinary retention ^b	0.12	0.54	0.82
Interval vaginal delivery	0.37	0.41	0.38
Constant	-0.50	2.11	0.81

^a all the variables are entered into the logistic regression model

^b in the index pregnancy in 1996

* Normal delivery vs. forceps delivery vs. vacuum extraction

Conclusions

One interval vaginal delivery does not increase risk of urinary stress incontinence four years after the index vaginal delivery.