

PREVALENCE AND PREDICTORS OF EXPERIENCING URINARY OR DOUBLE INCONTINENCE AS COMPARED TO BEING CONTINENT 1 YEAR POSTPARTUM: A PROSPECTIVE COHORT STUDY.

Hypothesis / aims of study

The aim was to explore the prevalence and predictors of urinary (UI) or double incontinence (DI, the combination of UI and anal incontinence, AI) as compared to being continent, in late pregnancy and 1 year postpartum.

Study design, materials and methods

During the period 2009-2011 primiparae over the age of 18 at two separate hospitals answered questions about AI and UI symptoms experienced in the last four weeks in pregnancy and one year postpartum on the St. Mark's score and ICI-Q SF score. AI was defined as stool incontinence stool monthly or more often, flatus incontinence weekly or more often, or combinations of two or more incontinence symptoms including fecal urgency on the St. Mark's score. UI was defined as scoring more than 1 point on the ICI-Q score. DI was defined as experiencing a combination of AI and UI.

Participants responding at both time points were categorized into either continent (no incontinence symptoms), UI only (UI symptoms, no AI), or DI (UI and AI combined). Women experiencing AI symptoms alone (n=55) were not included in these analyses. Prevalence of UI and DI was calculated and multiple logistic regression analyses were applied to identify predictors of the different continence statuses at one year postpartum.

Results

A total of 976 women responded at both time points. More than sixty percent of the participating women were continent one year after delivery, whereas UI, and DI was reported by 31% and 8%, respectively. One in five women with DI had an instrumental delivery whereas one in five continent women and only 7% of women with UI had delivered by way of caesarean section. One in ten women with DI had sustained a perineal tear grade 3 or 4, compared to just under 3% among the continent women. Few women reported severe incontinence symptoms at either time point; however the range of reported symptoms was wide at both time points (Table 1).

Young age at delivery and perineal tear grade 3 or 4 predicted postpartum DI. In addition, women experiencing UI in late pregnancy had a four-fold increased risk of postpartum DI, whereas DI in late pregnancy increased the risk by nearly 12 times. UI in late pregnancy and age over 28 years at delivery increased the risk of UI at 1 year postpartum, whereas a caesarean delivery reduced the risk. Being continent during delivery and aged between 24 and 28 at delivery increased the chance of being continent postpartum (Table 2).

Interpretation of results

Few women reported severe symptoms in late pregnancy or delivery, but nearly 40% reported experiencing UI or DI one year postpartum. These results show that continence status during pregnancy may predict continence status one year after delivery. Delivery-related factors such as mode of delivery and perineal tears grade 3 and 4 were found to be associated with continence status postpartum.

Concluding message

Identifying women with incontinence symptoms during pregnancy and improved knowledge of delivery-related factors associated with postpartum incontinence may improve postpartum follow-up and thus reduce the long-term consequences of incontinence.

Table 1. Characteristics of the study population at 1 year postpartum (n=976)

	Continent 1 year postpartum (n=594)	UI 1 year postpartum (n=300)	DI 1 year postpartum (n=82)
Age, mean years (SD) [range]	28.6 (4.2)[19,42]	29.8 (4.6)[18,42]	28.1 (4.7)[19,39]
Occiput posterior presentation	78 (13.1)	29 (9.7)	11 (13.4)
Spontaneous vaginal delivery	389 (65.5)	222 (74.0)	55 (67.1)
Instrumental delivery	94 (15.9)	58 (16.3)	18 (21.9)
Casarean section	111 (18.6)	20 (6.7)	9 (11.0)
No perineal tear	397 (66.8)	155 (51.7)	49 (59.8)
Perineal tear grade 1-2	181 (30.5)	130 (43.3)	24 (29.3)
Perineal tear grade 3-4	16 (2.7)	15 (5.0)	9 (11.0)
Incontinence scores	Mean (SD) [range]	Mean (SD) [range]	Mean (SD) [range]
St. Mark's score in LP	2.0 (2.5) [0,17]	2.2 (2.8) [0,18]	4.2 (4.2) [0,16]
St. Mark's score 1 year postpartum	.87 (1.5) [0,6]	1.3 (2.7) [2,17]	5.4 (3.6) [1,17]
ICI-Q score in LP	1.4 (2.5) [0,4]	3.7 (3.5) [0,17]	4.6 (3.9) [0,18]
ICI-Q score 1 year postpartum	0.1 (0.1) [0,1]	5.1 (2.7) [2,17]	6.8 (3.7) [2,17]

Table 2. Predictors of continence status one year after first delivery (n=976).

	Continent 1 year postpartum (n=583)	UI 1 year postpartum (n=308)	DI 1 year postpartum (n=85)
	OR	OR	OR
Age 23 years or lower	.58**		2.1**
Age 24-27 years	1	1	1
Age 28-34 years	.67**	1.5**	
Age 34 and over	.47**	2.2**	
Occiput posterior presentation			
Vaginal delivery	1	1	1
Instrumental delivery			
Caesarean section		.32*	
Perineal tear grade 0-2	1	1	1
Perineal tear grade 3-4			2.9**
Caesarean section	2.7*		
Continent	1	1	1
UI in late pregnancy	.22*	4.0*	3.9*
AI in late pregnancy	.40*		2.8**
DI in late pregnancy	.14*	3.0*	11.6*

Multiple logistic regression analyses; *p<.001, **p<.05, LP: Late pregnancy

Disclosures

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