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CHANGES IN ANAL INCONTINENCE AMONG FIRST TIME MOTHERS – WHAT HAPPENS IN PREGNANCY AND DURING THE FIRST YEAR AFTER DELIVERY?

Hypothesis / aims of study

To explore changes in anal continence (AI) from late pregnancy and during the first year after delivery among primiparae, and to investigate factors associated with experiencing AI twelve months post partum.

Study design, materials and methods

In the present cohort study, primiparae answered questions about AI experienced in late pregnancy and six and twelve months post partum. Socioeconomic and delivery related data were obtained from hospital records.

Results

Of the 862 participants (mean age 29.0 years, range:18-42), 292 (34%) reported AI in late pregnancy, whereas 186 (22%) and 199 (23%) were incontinent six and twelve months postpartum, respectively. Among women incontinent during pregnancy, 105 were incontinent at six months and 114 at twelve months. Ninety-nine women incontinent at six months postpartum also experienced persistent AI at twelve months. New onset AI was reported by 81 (14%) and 85 (15%) at six and twelve months postpartum, respectively (Table 1). Young age and AI in late pregnancy or six months postpartum were risk factors for reporting AI at twelve months postpartum. Occiput posterior presentation was the only delivery related variable increasing the risk of postpartum AI (OR:1.6, 95% CI:1.0-2.7) (Table 2).

Table 1. The relationship between continence statuses in late pregnancy, six and twelve months postpartum

	6 months postpartum		12 months postpartum		
	Continent	Incontinent	Continent	Incontinent	
	(n=676)	(n=186)	(n=663)	(n=199)	
	n (%)	n (%)	n (%)	n (%)	
Continent in late pregnancy (n=570)	489 (85.8)	81 (14.2)	485 (85.1)	85 (14.9)	
Incontinent 6moPP(n= 292)	187 (64.0)	105 (36.0)	178 (61.0)	114 (39.0)	
			n (%)	n (%)	
Continent in late pregnancy (n=676)	-	-	576 (85.2)	100 (14.8)	
Incontinent 6moPP (n=186)	-	-	87 (46.8)	99 (53.2)	

LP: Late pregnancy; 6moPP: 6 months postpartum; 12moPP: 12 months postpartum.

Table 2. Associations between demographic characteristic and the primary endpoint anal incontinence 12 months postpartum among participants continent and incontinent

a) in late pregnancy and b) six months postpartum. Results from logistic regression analyses.

a.)	Continent in late pre	egnancy (n=570)	Incontinent in late pregnancy (n=292)			
	Univariate	Multivariate	Univariate	Multivariate		
	analyses	analyses*	Analyses	analyses*		
	OR (95%	OR (95%	OR (95%	OR (95%		
	CI) p	Cl) p	CI) P	CI) p		
Incontinent 6 moPP	5.0 (2.9-8.5) <.001	5.3 (3.1-9.1) <.001	5.6 (3.3-9.5) <.001	5.7 (3.4-9.8) <.001		
Age						
18-23.3 yrs	2.5 (1.2-5.2) .016	3.0 (1.4-6.4) .006	3.4 (1.6-7.4) .002	3.2 (1.4-7.3) .008		
23.4-28.7 yrs	ref	ref	Ref	ref		
28.8-34.5 yrs	1.0 (.59-1.7) .958	1.0 (.58-1.8) .940	.87 (501.5) .633	.75 (.41-1.4) .359		
≥ 34.6 yrs	2.2 (1.0-4.6) .043	2.2 (.98-4.8) .057	1.6 (.72-3.4) .266	1.4 (.60-3.2) .442		
b.)	Continent 6 moPP (n=676)	Incontinent 6 moPP	(n=186)		
	Univariate	Multivariate	Univariate	Multivariate		
	analyses	analyses*	Analyses	analyses*		
	OR (95%	OR (95%	OR (95%	OR (95%		
	CI) p	CI) p	CI) P	CI) P		
Incontinent in LP	2.6 (1.7-4.1) <.001	2.6 (.17-4.0) <.001	3.0 (1.6-5.4) <.001	3.2 (1.7-5.7) <.001		

18-23.3 yrs	3.2 (1.7-6.0)	<.001	3.2 (1.6-6.0)	.001	3.5 (1.2-11)	.026	NS
23.4-28.7 yrs	ref		ref		Ref		NS
28.8-34.5 yrs	.96 (.58-1.6)	.871	.97 (.58-1.6)	.898	.83 (.43-1.6)	.580	NS
≥34.6 yrs	1.7 (.81-3.4)	.166	1.6 (.75-3.3)	.228	2.4 (.86-6.5)	.096	NS
Occiput poste	erior						
presentation	.88 (.65-1.2)	.406	NS	-	1.5 (.93-2.3)	.098	1.6 (1.0-2.7) .043

* After backwards selection of variables. OR. Odds ratio; CI: Confidence interval; LP: Late pregnancy; 6moPP: Six months postpartum.

Interpretation of results

A substantial proportion of young, healthy primiparae in the present study experienced AI in late pregnancy and postpartum. These women may be at risk of suffering AI in the long term.(1) Interestingly, more women were incontinent in late pregnancy than after delivery, challenging the opinion that vaginal delivery as the main cause of women's anal incontinence.

The present results support the view that hormonal changes and mechanical trauma in late pregnancy may be likely to induce functional impairment to pelvic organs than earlier recognized. Considering that only one in five volunteer information or seek medical help for their AI symptoms, mainly due to embarrassment(2), there is a need for an increased awareness among health professionals about the prevalence and predictors of experiencing AI symptoms in pregnancy and postpartum. Further, health professionals should inform pregnant and postpartum women about AI symptoms, e.g. that they are common and may be transient.

Concluding message

One in three women suffered AI during late pregnancy and one third of these experienced persistent AI during the following year. New onset AI was reported by 15% at both time points postpartum and more than half of women incontinent at six months postpartum experienced persistent AI six months later. Experiencing AI symptoms twelve months postpartum was associated with AI in late pregnancy or six months postpartum, and the results may indicate that hormonal and mechanical changes in pregnancy may affect postpartum AI more than vaginal delivery

References

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