

## PREVALENCE AND PREDICTORS OF ANAL INCONTINENCE 6 YEARS AFTER FIRST DELIVERY

### Hypothesis / aims of study

Our main aim was to explore the prevalence and predictors of anal incontinence (AI) symptoms six years after first delivery.

### Study design, materials and methods

The present study is a follow-up from a previously published survey on the prevalence and predictors of AI in late pregnancy and the first year postpartum among first time mothers.(1) The participants reported frequency and severity of AI symptoms experienced six years after their first delivery on the St. Mark's score. Data on socioeconomic status and any subsequent deliveries were also collected. Data related to the first delivery were obtained from hospital records. The Student's t-test for paired data was used when comparing St. Mark's scores at the three time points. Predictors of experiencing AI six years after first delivery, was assessed using multivariate logistic regression analyses.

### Results

A total of 1571 women were included in the original study, 1031 (66%) responded 12 months postpartum, and 726 women (48%) responded six years after first delivery (mean: 6.4 years, SD: 0.5). Mean age was 34.6 (SD: 4.6) years. There were no significant differences between responders and non-responders at six years after first delivery with regards to age, educational level at time of first delivery, birthweight of the first baby, fetal presentation at first delivery, or AI in late pregnancy or 12 months after first delivery. One in ten women reported anal incontinence six years after first delivery, and flatus incontinence was the only AI symptom more frequently reported at six years compared to 12 months postpartum (Figure 1). The St. Mark's score at six years after first delivery (1.4 points) was significantly lower than in late pregnancy (2.3 points,  $p < .001$ ). The difference in St. Mark's score between 12 months and six years after first delivery was not significant ( $p = .272$ ). Experiencing urinary incontinence six years after first delivery and subsequent deliveries with complications, including caesarean sections, were associated with an increased risk of AI six years after first delivery (Table 1).

### Interpretation of results

One in ten women reported some anal incontinence six years after their first delivery. The incidence of incontinence for formed stool was gradually decreased from late pregnancy and one year after delivery until six years after delivery, however, incontinence for loose stool and urgency was almost unchanged during the same period. More women reported incontinence for flatus at six years compared to one year after delivery. A subsequent complicated vaginal delivery was the strongest predictor for anal incontinence six years after their first delivery.

### Concluding message

Some women with anal incontinence after their first delivery experience a little improvement from one year until six years after first delivery, but still one in ten women suffer from leakage of loose stool or flatus and experience urgency. A subsequent complicated vaginal delivery predicts incontinence six years after their first delivery.

Figure 1. Percentage of women reporting AI symptoms in late pregnancy, 12 months and six years after first delivery.

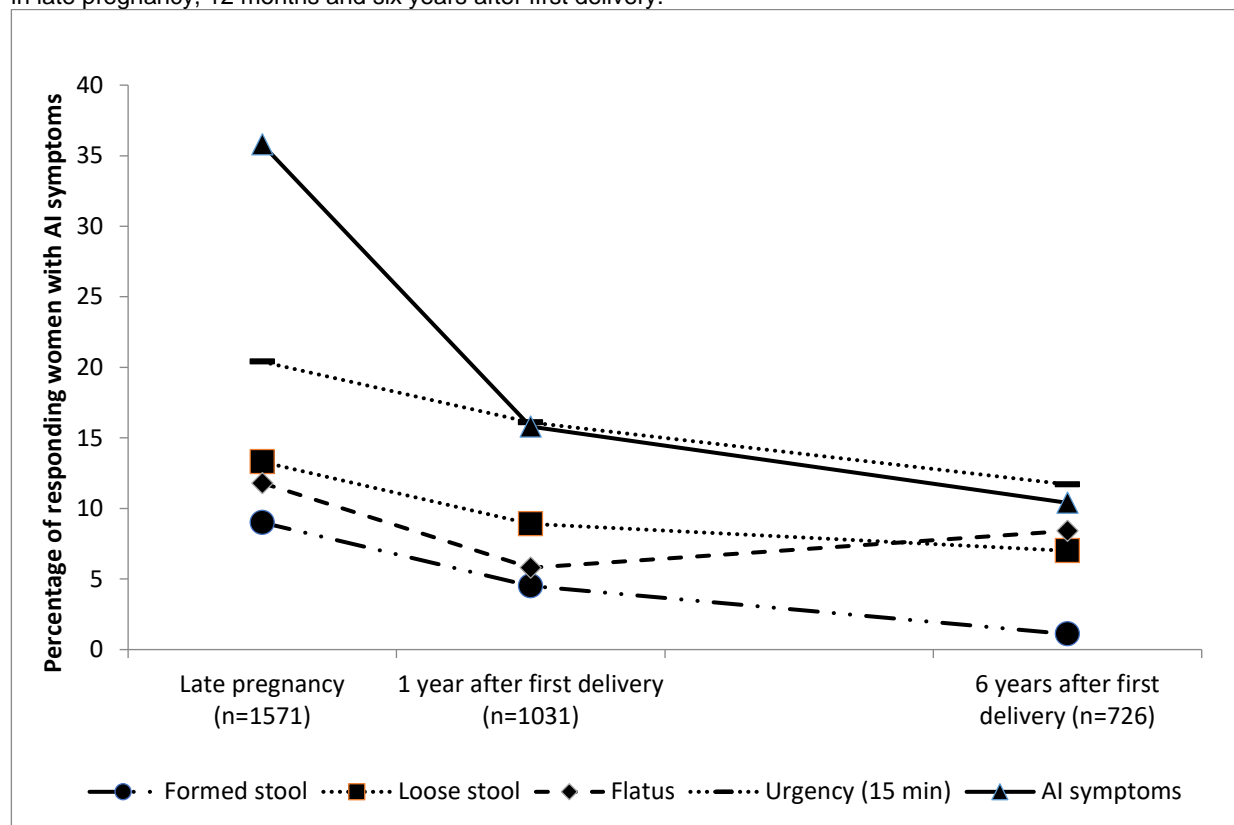


Table 1. Predictors of anal incontinence 6 years after first delivery. Results from logistic multivariate regression analyses.

	Univariate analyses	Multivariate analyses	
	OR	OR	95% CI
Age	1.0	-	-
Pelvic floor muscle training	1.6*	NS	-
Regular training 6 years after first delivery	1.1	-	-
Obstetric anal sphincter injury at first delivery	1.3	-	-
≥1 subsequent vaginal delivery with complications	1.5*	1.8*	(1.2-2.7)
Urinary incontinence 6 years after first delivery	1.2**	1.2**	(1.2-1.3)
Anal incontinence in late pregnancy (1 <sup>st</sup> delivery)	0.8	-	-
Anal incontinence 12 months after first delivery	1.4	-	-

\*p<.05; \*\*p<.001

#### References

- Johannessen HH, Wibe A, Stordahl A, Sandvik L, Backe B, Mørkved S. Prevalence and predictors of anal incontinence in late pregnancy and one year after delivery: A prospective cohort study. BJOG 2014. Feb;121(3):269-79. doi: 10.1111/1471-0528.12438. Epub 2013 Sep 10.

#### Disclosures

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