Changes and predictors of anal incontinence in late pregnancy and the first year postpartum

Hege Hølmo Johannessen1,2, Arne Wibe3,4, Leiv Sandvik5, Arvid Stordahl6, Siv Mørked2,7
Department of Physiotherapy, Ostfold Hospital Trust, Norway1, Department of Public Health and General Practice, Norwegian University of Science and Technology (NTNU), Norway2, Department of Cancer Research and Molecular Medicine, NTNU, Norway2, Department of Surgery, St. Olavs Hospital, Trondheim University Hospital, Norway3, Department of Biostatistics and Epidemiology, Oslo University Hospital, Oslo, Norway4, Department of Surgery, Ostfold Hospital Trust, Norway5, Department of Research, St. Olavs Hospital, Trondheim University Hospital, Norway6

Aims
To explore changes in continence status among primiparae and predictors of new onset and persistent anal incontinence (AI) in late pregnancy and during the first year postpartum.

Study design, materials and methods
In the present cohort study, primiparae answered questions on the St. Mark's score about AI symptoms experienced in late pregnancy, six and twelve months postpartum. AI was defined as experiencing one or more AI symptoms; leakage of formed or loose stool monthly or more, leakage of flatus weekly or more and/or urgency. Participants were classified as continent or incontinent when experiencing no AI symptoms or any AI symptom, respectively. Socioeconomic and delivery related data were obtained from hospital records.

Results
One in three of the 862 participants responding at all three time points reported AI symptoms in late pregnancy, whereas close to 20% were incontinent six and 12 months postpartum (Figure 1). New onset AI was reported by 81 (14%) and 85 (15%) at six and 12 months postpartum, respectively, and 99 participants reported persistent AI from 6 to 12 months postpartum (Table 1).

Being young at first delivery and having experienced AI in late pregnancy or six months postpartum, were found to be significant risk factors for reporting AI 12 months postpartum. The only delivery-related variable increasing the risk of AI postpartum was delivering an infant in the occiput posterior position (OR:1.6, 95% CI:1.0-2.7) (Figure 2).

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. More women reported AI in late pregnancy than postpartum, suggesting that hormonal, mechanical and neuromuscular changes in pregnancy may influence continence status more than vaginal delivery.

Considering that few volunteer information or seek medical help for their AI symptoms, mainly due to embarrassment, there is a need for an increased awareness among health professionals about the prevalence and predictors of experiencing AI symptoms in pregnancy and post partum. Further, health professionals should inform pregnant and post partum women about AI symptoms, e.g that they are common and may be transient, and thus possibly reducing the long term adverse effects of AI as well as associated personal and societal cost of AI.

Concluding message
The majority remained continent throughout the study period. However, 15% reported new onset AI at both six and twelve months post partum and more than half of women incontinent at six months post partum experienced persistent AI six months later. Further, experiencing AI symptoms in late pregnancy or six months post partum was found to be closely associated with AI at 12 months post partum. Pregnancy-related changes may influence postpartum AI more than vaginal delivery, though vaginal delivery and trauma may add to these functional defects, and result in some new onset AI postpartum

References

Acknowledgement:
This project was funded by The Norwegian Women's Public Health Association, The Norwegian ExtraFoundation for Health and Rehabilitation through EXTRA funds, The Central Norway Regional Health Authority, St.Olavs Hospital Trondheim University Hospital, Norway and Ostfold Hospital Trust, Norway

Figure 1. Changes in continence status from pregnancy through the first year postpartum

Table 1. New onset and persistent anal incontinence in the first year after delivery

Figure 2. Risk factors for reporting anal incontinence at 12 months postpartum

Contact details:
Hege Hølmo Johannessen, telephone: +47 997 21 345
e-mail: hege.holmo.johannessen@so-hf.no