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The long-term effects of obstetrical anal sphincter injury on pelvic floor function

Akademisk avhandling

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Avhandlingen baseras på följande delarbeten

I. Long-term effects of vacuum extraction on pelvic floor function: a cohort study in primipara. Nilsson I, Åkervall S, Milsom I, Gyhagen M. Int Urogynecol J 2016;27:1051-6.

II. Symptoms of fecal incontinence two decades after no, one, or two obstetrical anal sphincter injuries. Nilsson IEK, Åkervall S, Molin M, Milsom I, Gyhagen M. Am J Obstet Gynecol 2021;224(3):276.e1-276.e23.

III. Temporal trends in obstetric anal sphincter injury from the first vaginal delivery in Austria, Canada, Norway, and Sweden. Gyhagen M, Ellström Engh M, Husslein H, Koelbl H, Nilsson IEK, Schulz J, Wagg A, Milsom I. Acta Obstet Gynecol Scand 2021;100(11):1969-1976.

IV. Severity and impact of accidental bowel leakage two decades after no, one, or two sphincter injuries. Nilsson IEK, Åkervall S, Molin M, Milsom I, Gyhagen M. Am J Obstet Gynecol 2023; doi: https://doi.org/10.1016/j.ajog.2022.11.1312 Online ahead of print.

SAHLGRENSKA AKADEMIN
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Abstract

Background: As women live longer, the long-term effects of childbirth may negatively affect their quality of life and professional careers.
Aim: This thesis investigates the long-term effects of vacuum extraction (VE) and one and two obstetrical anal sphincter injuries (OASIs). Temporal trends of OASI incidence were compared in four countries with comparable national medical birth registers and healthcare systems.
Material and methods: The study cohorts consisted of women with one (Papers I and III) or two deliveries (Paper II and IV). National birth registers were used, and in Papers I, II, IV birth register data were linked to information from a questionnaire survey on current pelvic floor disorders (PFDs).
Results:
Paper I: OASI occurred three times more often during VE than spontaneous vaginal delivery (SVD). One OASI doubled the long-term prevalence of faecal incontinence (FI), irrespective of SVD or VE. The prevalence of other PFDs was similar after SVD and VE but lower after an acute caesarean section.
Paper II: The risk for a repeat OASI almost tripled after an OASI. The long-term prevalence of all components of FI doubled and tripled after one and two OASIs. Severe FI increased 3- and 5-fold.
Paper III: In 2004-2016, the incidence of OASI in primipara varied widely over time and between countries despite similar socio-economic conditions. Canada reported the highest and Austria the lowest rate of OASI. Only Norway reported a consistent and significant decrease in OASI incidence, which more than halved during the study period.
Paper IV: There was a significant trend of more frequent leakage, more severe grades of incontinence parameters, and an increasing impact of anal incontinence after one and two OASIs. The first and the second OASIs showed an equal cumulative effect on multiple self-reported outcome measures.
Conclusion: OASI was a potent risk factor for the prevalence, severity, and impact of long-term FI. Instrumental delivery was the leading risk factor for OASI. Perineal protection, when systematically and persistently applied, may lower the rate of OASI.

Keywords: Anal incontinence, caesarean section, faecal incontinence, pelvic organ prolapse, severity, urinary incontinence, vaginal delivery.

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